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THE SHIP MASTERS' NEW PRESIDENT.

CAPT. GEORGE McCULLAGH.

Capt. George McCullagh, who has just been chosen Grand President of the Ship Masters' Association, has led an active life on the water, and gained his knowlege of the trade, to which he is an ornament, by practical experience. He has taken all the hard knocks that seem inevitable in that calling, but with no perceptible abatement of his youthful ardor and certainly with no denotement of advancing years. He ran away from home and went to sea at the age of eleven years. He remained two years on a sailing vessel and then began his steamboat career. The American civil war interrupted it, however, and he served as a soldier on the Union side from June 19, 1861, to August 5, 1865. In the autumn of 1865 he again took up steamboating and has continued in it uninterruptedly for thirty years. During that long and honorable service he has sailed the steamers Ivanhoe, Wissahickon, India, Winslow, Cumberland, George T. Hope, Colorado, Avon, Seneca, and others, besides serving four years as pilot of the United States revenue cutter Fessenden.

While still in command of the Seneca he resigned and bought an interest in a new boat, which he sold out and bought the Rhoda Emily, of which he is now master and one-half owner.

Capt. McCullagh organized Detroit Lodge No. 7, of the body of which he is now the executive head, and has passed through the principal chairs to his present post of distinction. He is also a Knight Templar, a 32d degree Mason, a Noble of the Mystic Shrine, and colorbearer of the famous Detroit Commandery No. 1, Knights Templar. He has been a resident of Detroit since 1858 and his family consists of his wife and one daughter, an engaging and intellectual young woman of 20. Wherever he is known Capt. McCullagh is held in the highest esteem, for he is made of materials that become brighter with use.

PLANTS IMPROVED AND PRICES LOWER.

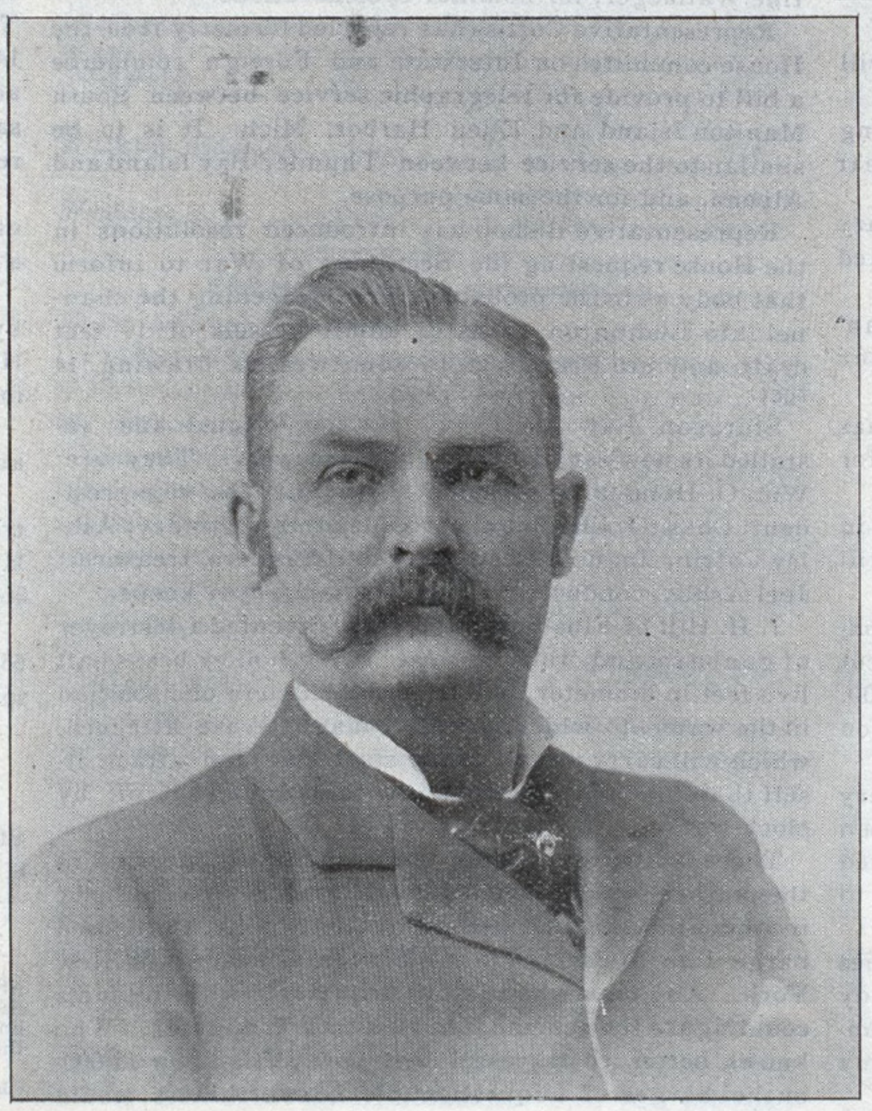
Secretary Herbert, of the Navy Department, in his recent annual report, said that in five years the price per ton for building gunboats had gone down 26 per cent in this country, and the price per ton for building torpedo boats had gone down 20 per cent. It is also estimated that within the same time the price of building war ships has declined nearly 30 per cent. This compares more than favorably with similar work abroad. This means in fact that American ship builders are now in a position to compete with the best foreign shipbuilders in the construction of war vessels. And if they can do this in war vessels, why not in commercial vessels? It is certain that the time is near when they can do so. Every new war vessel built by them brings them greater facility. And were they to receive orders for commercial steamers, they would, beyond all doubt, quickly be able to place themselves on a par will, if not be superior to the foreign builder. This must in the end come to such a position, for events show that the United States are maritime in every sense. They may have strayed from their true course but circumstances will bring them back to it again. The maritime interest is destined to become again the most important in this country. It is to be a leader in international commerce, and our shipbuilders are to be the great assistants in the work.—Maritime Register.

THIS testimony in regard to the folly of state taxation of shipping comes from Secretary Walthau, of the Shipowners' Association of San Francisco. He says: "The taxation of ships is an injustice which should be done away with. Nearly all the American ships in the Atlantic hail from New York for the reason that there are no taxes to be paid there. Some time ago parties were negotiating for the building of a steel steamer here, to cost $100,000. They concluded that they could better afford to pay $120,000 in New York on account of the enormous charges in San Francisco.

NEW SAILING DIRECTIONS.

LAKES ERIE, ONTARIO, AND ST. CLAIR AND DETROIT AND ST. CLAIR RIVERS.

The Hydrographic Office has just issued the last of its series of sailing directions for the Great Lakes, in Part IV, which embraces everything below Lake Huron. The book is in the same form and as complete as its predecessors, and especially valuable in the information it gives regarding the obstructions in the lower lakes which have been developed by the low water. A few copies of this book have already been received at the MARINE RECORD office, No. 144 Superior street, and will be sold at the price fixed by the government, $1 per volume.



CAPT. GEORGE McCULLAGH.

Chief Constructor Hichborn, of the Bureau of Construction and Repair, U. S. Navy, Washington, D. C., says of the Holland submarine torpedo boat building at the Columbian Iron Works, Baltimore, Md., that she may mean to future fighting ships and methods of warfare what the much-doubted monitor proved to our present navy.

THE NEW FUEL AGREEMENT.

A large number of vessel men gathered in Cleveland Wednesday and discussed the fuel question. Both the hard and soft coal shippers were present during a part of the meeting, and as they seem disposed to meet owners half way, an agreement was adopted which gives the signers full liberty to fuel with the shipper if he so desires, provided that shippers show no disposition to take advantage. This applies to the soft coal as well as the hard coal ports, and will, it is thought, be signed by practically all the owners whose vessels carry coal. The form of the agreement follows:

"We, the undersigned, owners, managers and agents of vessels on the Great Lakes, do hereby agree each for himself and each to and with every other signer as follows:

"That whereas great abuses crept into the business of fueling steamers whereby certain shippers and dock managers required a steamer to obtain fuel in some particular place as a condition of the charter or in connection with furnishing or handling of cargoes, and certain shippers discriminated against consorts, which do not require fuel, unreasonable prices were charged and various extortions were practiced upon vessels and their owners in the matter of fueling.

"And whereas to meet these abuses in part many vessel owners last year refused to purchase fuel under any circumstances from the coal shipper by reason of the abuses referred to; now, in order to prevent any unfairness or injustice on either side, we agree that during the season of 1896, our vessels, and every one of them, shall obtain fuel wherever it may seem to their best advantage, whether with the shipper of cargo or any other shipper, the manager of any dock, or from any fueling concern or elswhere, but this shall be upon the basis and condition that shippers of coal, whether at Buffalo or any other Lake Erie port, and whether of hard or soft coal, and every other shipper or manager of any dock shall leave the vessel, her owner and master free to purchase fuel at any place the owner and master shall deem best for the interest of the vessel and shall not make fueling a condition of chartering or handling the vessel's cargo and shall not discriminate against consorts because of their not requiring fuel or charge more than the usual market price, taking into consideration the quality of coal furnished.

"And for the purpose only of securing absolute freedom of trade to all parties in the matter of fueling, the undersigned owners agree that they and each of them shall refuse to deal at all in the matter of fueling with any parties who shall attempt to abridge the right of the vessel to obtain fuel independently of any other consideration and for that purpose we adopt as our committee the following, who were named at the Lake Carriers' meeting, James W. Millen, chairman; William S. Mack, John Rice, B. L. Pennington, M. A. Bradley, James Corrigan, David Vance, Thomas Wilson, George G. Hadley, authorizing them to appoint a sub-committee of their own number if found more convenient, said committee being hereby invested with authority in our name and for us to adopt such proper measures as may be necessary in such case from time to time, each agreeing to report at once to the chairman of the committee any such instance and each of us agree to give directions to our agents and masters to do nothing directly or indirectly to defeat the purpose and intention of this agreement."

The annual meeting of the Inter-Lake Yachting Association is in session at Detroit. The place of holding Inter-Lake Regatta will probably be decided at this meeting. It is hoped that the places fixed will be far enough down Lake Erie to secure the attendance of a goodly number of Canadian yachts. Perhaps the race between the Chicago challenging yacht and one of the Royal Canadian Yacht Club will be arranged for the same occasion.

LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interest of Lake Carriers, and improve the character of the service rendered to the public.

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Thomas Wilson,	Cleveland.	Alvin Neal,	Port Huron.
John W. Moore,	Cleveland.	M. M. Drake,	Buffalo.
W. S. Mack,	Cleveland.	W. Bullard,	Buffalo.
David C. Carter,	Detroit.		

FLOTSAM AND JETSAM.

Loading coal into vessels in ordinary at Ashtabula will soon begin at the car dumping machine.

While constructing the Lake Superior & Ishpeming railroad another extensive body of ore was found near Marquette.

Capt Arthur Dow has bought the little schooner, Mary formerly owned by Capt. George Bolson, at United States Marshal's sale, for $73.

St. Clair County, Mich., farmers contemplate organizing a stock company for to build or purchase a steamer to carry their products to market.

The Northern Michigan Transportation Company has agreed to extend its dock 125 ft. at Petoskey, Mich., for the accommodation of large steamers.

Twelve new machines for hoisting ore are to be put in at Erie by the Pennsylvania Company. This will double the present capacity of the company's dock.

Saginaw River saw mills cut 433,683,033 feet of lumber during 1895, and have on hand 271,531,851. The cut shows a decrease, as compared with 1894, of 47,500,000. The cut of shingles was 52,845,000, and the amount on hand is 26,250,000.

Mr. J. H. Farwell of Detroit, says: "I can build every foot of a tunnel under Detroit River, by the aid of open coffer dams, for $3,500,000 and when the work is turned over for the use of the railroads will have $500,000 to put in my own pocket."

Eastern shipbuilders are buying up large quantities of the hard white oak that grows on the poor sandy land of Western Michigan. They say it is more compact and durable for shipbuilding purposes than any other oak they can find.

The allotments between the various Lake Superior ranges by the recent agreement of operators is said to be as follows: Mesaba range, 3,500,000 tons; Vermillion, 1,100,000; Marquette and Menominee, 3,400,000; Gogebic, 2,500,000; total, 10,000,500.

Ed. Schneideman, an old and faithful employe of the Goodrich Transportation Co., has just been promoted to the management of the company's affairs at Racine vice Chas. Thompson, who has been forced to retire on account of failing health.

On July 30, 1895, Louis Kiltz fell down a hatchway on the steamer St. Paul and sustained injuries that crippled him for life. He brought suit for $15,000 damages, but the jury found that the owner of the boat did not by his negligence contribute to the accident.

At a meeting of stockholders of the Sandusky & Islands Steamboat Co., owning the Arrow and American Eagle, held on the 6th inst., August Schmidt, Jr., was elected president and director, vice President A. Wehrle, Sr., deceased. Eugene McFall, purser on the Arrow, was elected general manager. Frank M. Kelley, of Kelley's Island, will manage the American Eagle.

Propellor Pentagoet, late Revenue Cutter Bibb, of the lakes, has been overhauled and is again on the route to Eastport.—American Shipbuilder.

It is expected that the total appropriations under the river and harbor bill, as reported by the House Committee on River and Harbors, will not exceed $6,000,000.

Gladstone shipments for the season of 1895 were as follows: Ore, 109,211 tons; grain, 4,000,000 bushels; flour, 1,200,000 barrels; lumber, 35,000,000 feet; cedar ties, 800,000. Receipts were: Coal, 205,000 tons; merchandise, 40,000 tons.

The New York State Assembly is considering a bill appropriating $170,000 for six floating elevators for Buffalo and New York; also a bill appropriating $12,000 to equip with boats and life-saving appliances the volunteer crews on inland waters. No open opposition to either has materialized.

Congressman Mahany has introduced a bill authorizing the Lighthouse Board to proceed with the construction of a temporary light and fog signal on North Manitou Island, to be used uutil a title to property for a permanent structure can be secured.

The annual report of shipments and receipts at Muskegon for 1495 shows a total tonnage of 441,289. There were thirty-two steamers and sail vessels in the trade. The item of merchandise received and shipped shows an increase of 700,000 tons, equivalent to 3,500 carloads.

John Fitzgerald and John Joys have each sold a one-sixth interest in the Neosho to C. H. Starke, for $12.000. Mr. Starke has transferred a twelfth interest each to his two daughters, Mrs. Eliza Gensche and Mrs. Ernestine Wallaeger, for nominal considerations.

Representative Corliss has reported formerly from the House committee on Interstate and Foreign commerce a bill to provide for telegraphic service between South Manitou Island and Ellen Harbor, Mich. It is to be similar to the service between Thunder Bay Island and Alpena, and for the same purpose.

Representative Bishop has introduced resolutions in the House requesting the Secretary of War to inform that body as to the probable cost of deepening the channel into Ludington so as to admit vessels of 19 feet draft, and into Frankfort, to admit vessels drawing 14 feet.

Sturgeon Bay M. E. B. A. has elected and installed its new set of officers for the year. They are: Wm. O. Helmholtz, president; Oluf Sanders, vice-president; Chas. O. Chapman, corresponding secretary; Ashley Cofrin, financial secretary; Oluf Sanders, treasurer; Joel Ashby, conductor; Henry Dumann, door keeper.

J. H. Hill of Flushing, Mich., has invented a destroyer of gunboats and other vessels. It is a hollow brass ball five feet in diameter, ballasted to remain in one position in the water, to which powerful magnets are attached, which will carry to ball to any steel hull and attach itself thereto. The explosive is within, and is set off by clock-work.

There is little doubt that there is nothing but wind in the feather-brained scheme which was given publicity in the Chicago Times-Herald, concerning a proposed barge line to carry grain between Chicago and New York. Any man who is at all acquainted with the facts could figure the scheme into ruin in five minutes. Who knows better than vessel men how little show 12,000-bushel barges of unquestionable seaworthiness would stand against great ships of 150,000 bushels capacity. The question of expense of trans-shipment speedily dwindles into nothingness, when compared with this handicap.

SOUVENIR OF ROACH'S SHIPYARD.

W. G. Duffield, of New York, has just published a very fine souvenir of Roach's Shipyard, now better known as the Delaware River Iron Shipbuilding and Engine Works, Chester, Pa. Steel engraved portraits of John Roach, and his son John B. Roach, head the illustrations, which, in addition to a view of the yard, consist largely of fine half-tone pictures of ships built at this yard. The book contains the cards of a number of firms which furnish material to the Delaware River yard, among them the Cleveland City Forge and Iron Co., American Ship Windlass Co., Ansonia Brass and Copper Co., Pencoyd Iron Works, W. & A. Fletcher Co., and the George F. Blake Manufacturing Co.

SUPERVISING INSPECTOR GALWEY'S REPORT.

The report of Supervising Inspector Galwey, of the eighth steamboat inspection district, shows that in the Detroit local district there were inspected in the year just ended 166 boats of 49,232 registered tons; Chicago, 261 boats, 123,235 tons; Grand Haven, 206 boats, 22,667 tons; Marquette, 107 boats, 4,580 tons; Milwaukee, 245 boats, 64,867 tons; Port Huron, 214 boats, 56,417 tons; total, 1,199 boats, as against 1,121 the previous year, and 320,988 tons, as against 256,322 tons the previous year.

There were built in the same period at Detroit district 12 boats of 852 registered tons; Chicago 8 boats, 6,422 tons; Grand Haven, 21 boats, 1,108 tons; Marquette, 4 boats, 11 tons; Milwaukee, 12 boats, 109 tons; Port Huron, 26 boats, 14,498 tons; the total is 83 boats, an increase of 7 over the previous year; total in tons, 22,951, an increase of 8,823 tons over the year before. It will be seen that in the Port Huron district, which includes the several shipbuilding ports on the St. Clair river, the output was nearly double that of all the other districts combined.

There were inspected during the same time 1,449 boilers, or 93 more than in the previous year.

In the entire district there were licensed 2 masters, 1,233 masters and pilots, 3 mates, 795 first-class pilots, 819 second-class pilots, 95 joint pilot and engineers, 1,486 chief engineers, 969 second and special engineers, a total of 5,402 licenses, an increase over the previous year of 21.

Seven masters, 59 pilots and 58 engineers were refused licenses. The licenses of 8 masters, 2 pilots and 2 engineers were suspended or revoked.

Four accidents, causing loss of 8 lives, by explosions or accidental escape of steam happened. Thirty eight steamers were wrecked or foundered, with 33 lives lost. There were 35 collisions. with 6 lives lost. There were 14 accidents by fire. One life was lost by a wreck. 4 by accidental drowning, 4 by miscellaneous causes; 9 were saved by life-saving apparatus carried aboard boats, as required by law.

Thirteen steamers went out of service, with a net tonnage of 4,449. The total in the year before was 8, with a tonnage of 2,427.

The amount of property lost by explosion was $10,020; by fire, $6,210 in the Chicago district, $32,800 in Grand Haven, $18,000 in Marquette, $18,000 in Milwaukee, $5,- in Port Huron; total, $80,010.

In Marquette district there was lost $8,000 by snags and in Milwaukee $600.

There was lost by wreck or foundering $4,500 in Detroit district, $17,400 in Chicago, $193,000 in Grand Haven, $252,800 in Marquette, $22,040 in Milwaukee, $66,000 in Port Huron; total, $596,240.

The total salaries of the district officers amounted to $33,016 93; traveling expenses, $7,128; incidentals, $984; total, $41,130.

VISIBLE SUPPLY OF GRAIN.

As compiled for THE MARINE RECORD by George F. Stone, Secretary Chicago Board of Trade, February 8, 1896.

CITIES WHERE STORED.	WHEAT. Bushels.	CORN Bushels	OATS. Bushels.	RYE. Bushels.	BARLEY Bushels.
Albany	.....	60,000	140 000	.....	45,000
Baltimore	156 000	1 666 000	70 600	100 000	.....
Boston	1,008 000	350 000	14 000	.....	.....
Buffalo	2,456.000	107.000	30 000	451 000	1 192,000
" afloat	259,000	.....	223,000	.....	250,000
Chicago	20 932 000	3 431 000	850 000	293,000	21 000
" afloat	138,000	3,221,000	227,000	.....	.....
Cincinnati	26,000	6 000	25.000	27,000	101 000
Detroit	296,000	28 000	13.000	9,000	6,000
" afloat	.....	.....	.....	.....	.....
Duluth and Superior	9,914.000	73,000	803 000	164 000	149,000
" " afloat	512 000	.....	.....	.....	.....
Indianapolis	950 000	20 000	.....	.....	.....
Kansas City	1 432,000	5 000	40,000	27.000	.....
Milwaukee	416 000	2,000	.....	202 000	47,000
" afloat	176,000	.....	120 000	.....	.....
Minneapolis	20 144 000	132 000	524,000	121 000	227,000
Montreal	427 000	7 000	192 000	3 000	47,000
New York	4 592 000	657 000	1 812 000	22.000	142 000
" afloat	532 000	75,000	226,000	.....	178,000
Oswego	6 000	24 000	.....	.....	110 000
Peoria	11 000	335 000	252 000	3 000	.....
Philadelphia	441.000	714.000	101 000	.....	.....
St. Louis	1,328 000	545 000	644 000	6 000	6,000
" afloat	.....	.....	.....	.....	.....
Toledo	759 000	527,000	134,000	126 000	.....
" afloat	.....	.....	.....	.....	.....
Toronto	31,000	.....	73.000	.....	41 000
On Canal	.....	8 000	12 000	.....	.....
On Lakes	.....	.....	.....	.....	.....
On Mississippi	32,000	187,000	16,000	.....	.....
Grand Total	66.119 000	12 174,000	6 541,000	1,554 000	2,562,000
Corresponding date 1895	82,322,000	12 883 000	7 136 000	364,000	1 738 000

VESSELS WITH ALTERED NAMES.

Beeson's Inland Marine Directory for 1895 contained a list of vessels whose names have been changed during the past six years. A subscriber to the RECORD suggests that a full list of these vessels for the lakes would be very convenient at times, and this list is published herewith:

PRESENT NAME.	RIG.	OLD NAME.	RIG.
A. B. C. F. M	Schr.	J. & A. Stronach	Schr.
Acme	Tug	Music	Tug
Æolius	St. Y.	Floss	St. Y.
Amboy	Schr.	Helena	Schr.
Argo	St. Y.	Leila	Tug
Arnold, Agnes	Tug	Bob Mills	Tug
Arthur	Schr.	G. C. Trumpff	Schr.
Ayer, Mary D.	Schr.	Jesse Hoyt	Schr.
Benham, C. E.	Tug	E. M. Peck	Tug
Blaine, James G.	Schr.	Pensaukee	Schr.
Blazier, J. S.	Tug.	H. A. Ballentine	Tug
Beard, James	Tug	Wesley Hawkins	Tug
Betts, Lizzie P.	Schr.	Miami Belle	Schr.
Badger, Horace H.	Schr.	Kate Gillett	Schr.
Bauer, John C.	Schr.	Planet	Schr.
Bloom, Nelson	Schr.	Meteor	Prop.
Boyce, Jessie L.	Schr.	Milan	Schr.
Buell, C. C.	Schr.	Erie Queen (Br)	Schr.
Brake, William	Schr.	S. Gardner	Barge
Caledonia	Prop.	William B. Morley	Prop.
Checotah	Schr.	George D. Russell,	Schr.
Caprice	St. Y.	Henry Douglass	Tug
City of the Straits	Stmr.	City of Detroit	Stmr.
Coaster	Prop	Fred Tank	Prop
Commodore	Tug	O. B. Green	Tug
Calumet	St. Y.	Lancet	St. Y.
City of Charlevoix	Prop.	Champlain	Prop.
Carrie May	Tug	Hattie Wood	Prop.
Corry, Mike	Schr.	J. O. Thayer	Schr.
Canton	Schr.	China	Schr.
City of Green Bay	Stmr.	M. C. Hawley	Prop.
City of Louisville	Prop.	R. C. Reid	Prop.
City of Sandusky	Stmr.	Jay Cooke	Stmr.
Denessen, Netie	Prop.	Schiller	Prop.
Dart, Russell	Schr.	Josephine (Br.)	Schr.
Darr, G. J.	Prop.	Gertrude	Prop.
Dobbie, Thomas	Schr.	Comanche	Schr.
Estelle, Hattie A.	Schr.	Mary L. Higgie	Schr.
Empire State	Stmr.	Sylvan Stream	Stmr.
Ebenezer	Schr.	Watts Sherman	Schr.
Emmet, Robert	Prop.	Col. Graham	Prop.
Fannie H.	St. Y.	Mamie, also Magna	St.Y.
Field, O. M.	Prop.	Cora Fuller,	Prop.
Gossoon	St. Y.	Bertie	St. Y.
Grace	St. Y.	Lily May	St. Y.
Gryphon	St. Y.	No. 12	St. Y.
Grummond, Grace	Schr.	Search	U. S.S.
Greyhound	Stmr.	Northwest	Stmr.
Grand Traverse	Prop.	Morley	Prop.
Gillett, F. W.	Prop.	Odd Fellow	Prop.
Henry	Prop.	George B. Dickson	Prop.
Hebard, D. L	Prop.	P. L. Johnson,	Prop.
Howard	Prop.	Admiral D. G. Porter	Prop.
Hutt, Hattie	Schr.	F. B. Stockbridge	Schr.
Island Belle	Prop.	William St. John	Prop.
Island Belle	Prop.	Island Wanderer	Prop.
Islander	Prop.	J. H. Kelley / John Thorn,	Stmr. / Stmr.
Irma	Schr.	Snow Drop (Br.)	Schr.
Iron City	Schr.	Daniel E. Bailey	Schr.
Iron State	Schr.	G. S. Hazzard	Schr.
Idlewild	Stmr.	Grace McMillin	Stmr.
Isbell, Wayne	Prop.	T. R. Merrill	Prop.
Jay Bird	Schr.	Lady Essex	Schr.
Jenks, E. H.	Prop.	E. M. Foster (Br.).	Prop.
Johnson, George W.	Prop.	D. W. Powers	Prop.
Kanters, R	Schr.	City of Woodstock	Schr.
Karste, Fritz	Prop.	H.C.Winship / F. H. Jackson	Prop. / Prop.
Lewiston	Prop.	Susan E. Peck	Prop.
Laurel	St. Y.	Val Walter	Tug
Lucille	Prop.	Pickup	Prop.
Lilly E.	Schr.	Louisa McDonald	Schr.
Little Wissahickon	Schr.	Edward Kean	Schr.
Lennox Leo	Prop.	Newsboy	Prop.
Marshall, Maggie	Prop.	William Crippin	Prop.
Mentor	Prop.	Hattie A. Fox	Prop.
Milton	Prop.	Florence (Br.)	Prop.
Morning Star	Prop.	Othello (Br.)	Prop.
Munson	Prop.	Two Brothers	Stmr.
Martin S. K.	Prop.	City of St. Joseph	Prop.
Mabee, Dan	Schr.	I. M. Hill	Schr.
Madden, Lizzie	Prop.	Chenango	Prop.
McCormick	Prop.	A. A. Eustaphieve	Prop.
Marquette	Prop.	Republic	Prop.
Mary Virginia	Prop.	George W. Lormer	Prop.
Massasoit	Schr.	Jessie Linn	Schr.
Monohansett	Prop.	Ira H. Owen	Prop.
Metacomet	Schr.	Iron State	Schr.
Naghtin, Capt. George W.	Schr.	R. C. Crawford	Schr.
Northwest	Schr.	Alex B. Moore	Schr.
Norseman	Prop.	Enterprise (Br.)	Prop.
Nielson, Fred	Prop.	Messenger	Prop
Otego	Prop.	C'y St.Catherines(Br)	Prop.
Otis, John	Prop.	G. J. Truesdell	Prop.
Pacific	Prop.	Syphax	Prop.
Pathfinder	Tug	J. A. Crawford	Tug
Pentagoet	Prop.	Bibb, George M.	Prop.
Periwinkle	Prop.	Commodore Perry	Prop.
Pewaukee	Prop.	Two Friends (Br.)	Bark
Pease, E. S.	Prop.	California (Br.)	Prop.
Potts, J. E.	Schr.	Mohawk	Prop.
Pauly, J. H.	Prop.	Thomson Kingsford	Prop.
Parker, A. A.	Prop.	Kasota	Prop.
Pringle J. C.	Prop.	W. H. Gratwick	Prop.
Pilgrim	St. Y.	Truant	St. Y.
Quito	Prop.	David Ballentine	Prop.
Raber, Violet H.	Prop.	Ivy M. Leathem	Prop.
Relief	Prop.	Michael Brand	Prop.
Raber, John	Schr.	General Worth	Schr.
Ruelle, Grace	Prop.	John Nice	Prop.
Ralph	Prop.	E. H. Miller,	Prop.
Spaulding, Jesse	Prop.	Henry Marshall	Prop.
Smith, Peter	Prop.	U. S. C. S. Ada	Prop.
Sprite,	Tug	Bertie Dahlke	Tug
Stimson, T. D.	Prop.	Virginia	Schr.
Schilde	Schr.	Canada (Br.)	Prop.
Sturges, George	Schr.	Higgie & Jones / Higgie	Schr. / Schr.
Stewart W. W.	Schr.	W. J. Spicer	Schr.
Stone, Ella G.	Prop.	E. L. Mason	Prop.
Scott, J. D.	Stmr.	City of Rochester,	Stmr.
Spinner, F. E.	Prop.	Quebec (Br.),	Prop.
State of Michigan	Prop.	DePere,	Prop.
State of Ohio	Stmr.	City of Alpena,	Stmr.
State of New York	Stmr.	City of Mackinac,	Stmr.
Smith, Charlie O.	Prop.	S. S. Rumage,	Prop.
Spry, John	Prop.	May Durr,	Prop.
Samoa	Prop.	Thomas W. Palmer,	Prop.
Tasmania	Schr.	James Couch,	Schr.
Traveler	Prop.	Bismarck, / Justice Field,	Prop. / Prop.
Thelma	Slp. Y.	Annie S.,	SlpY.
Upham, J. H., Jr.,	Prop.	M. R. Swan,	Prop.
Uncle Sam	Prop.	Little Giant,	Prop.
Valerie	Prop.	Golden Eagle	Prop.
Vega	Schr.	St. Paul / A. J. Covill	Schr. / Schr.
Vesta, Eugenia	Schr.	Russia (Br.)	Schr.
Volanta	St. Y.	Rosaline	Tug
Wahpiti	St. Y.	Straightaway	St.Y.
White Star	Prop.	J. Maria Scott	Schr.
Waukesha	Schr.	Nabob	Schr.
Waneka	St. Y.	Laura	Tug
Wayward	St. Y.	Winifred	St.Y.
Watkins, Edward	Tug.	U. S. S. Gen. W. W. Bellknap	Tug
		U. S. S. Gen. A. A. Humphrey	Tug
Wallace, C. B.	Prop.	V. Lutts	Stmr.

FROM ONE WHO REMEMBERS.

To the Editor of The Marine Record:

I notice in the last issue of the MARINE RECORD a list of the past and present steamers of the Goodrich Line, but not an accurate list.

The paddle steamer Comet was one of the Goodrich Line and plyed for many years on Lake Michigan.

The tow barge Manitowoc came out a paddle steamer and ran for years on the west shore of Lake Michigan in command of Capt. Barney Sweeney, was also one of the Goodrich Line. Respectfully,

CHARLES MCINTOSH,

Detroit, Feb. 7, 1896.

(The list in question was compiled from the records of the Goodrich Transportation Co., and the omission of the Comet was a clerical error, as was the omission of the steamer Indiana, which is still in commission. The St. Joseph was a twin screw steamer. The Bureau of Navigation's list of merchant vessels contains no account of the Manitowoc having formerly been a steamer. Many thanks for the correction.—ED.)

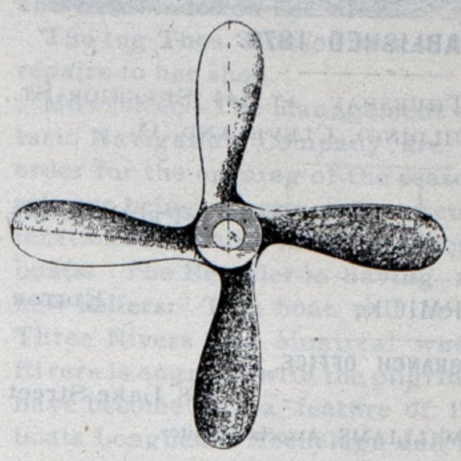
NOTES.

The American Line steamer St. Louis, which arrived at New York January 17, broke her own best previous record of six days, 13 hours and 25 minutes by 3 hours and 53 minutes, which is only 2 hours and 18 minutes behind the best westward record held by the American Liner New York. The New York, however, established the record of 6 days, 7 hours and 14 minutes in the month of September, 1894, while the St. Louis comes in very little behind it, in January, when the weather conditions are much less favorable for doing anything in the way of record smashing. The time of the St. Louis on this trip was 6 days, 9 hours and 32 minutes.

THOS. S. MARVEL & Co., Newburg, N. Y., have begun work on a steel schooner yacht, the contract for which was awarded to them by Gardner & Cox, of New York. She is to be 90 feet over all, 65 feet water line, and 18 feet breadth of beam, is to be first-class in every respect and is expected to be fast. The contract calls for her completion by April next. The firm with whom he contracted are the designers of the yacht, which Mr. Marvel believes is being built for racing purposes.

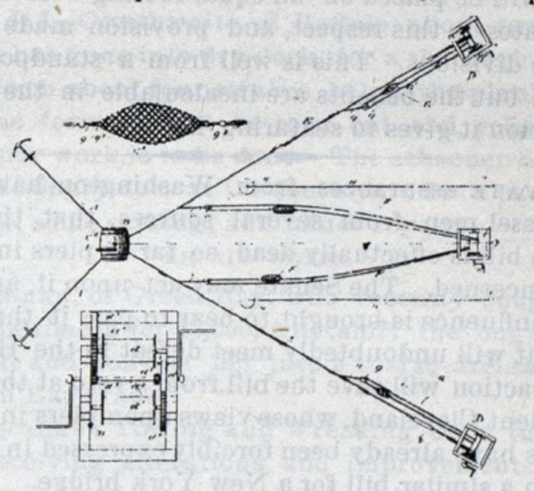
NEW INVENTIONS.

Mr. Alfred W. Case, of Highland Park, Conn., patentee of the Case Outward Thrust Propeller Wheel, whose advertisement appears elsewhere, has just secured a patent No. 553,953, on a new type of his wheel, for which he made application Sept. 21, 1895. The claim is for a screw propeller having a hub and a series of blades arranged about and projecting from it, each blade inclined forward in the direction of forward motion of the vessel as described, and also having its working surface at its center line offset and located in a plane raking backward at an angle from a radius passing through the root of the blade and in the plane of rotation of the screw. whereby a rearward and outward thrust upon the water is obtained in a forward rotary movement of the wheel.

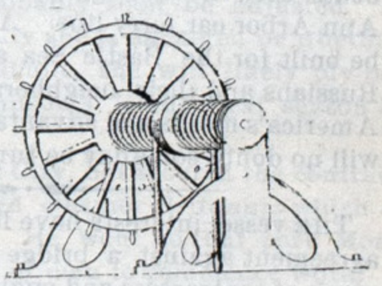


David Knowles, of Norfolk, Va., has patented (No. 554,128) an Apparatus for Distributing Oil for Calming Waves. He filed his application originally on Nov. 29, 1892, and renewed it April 5, 1894. The claim is for the combination with a stationary post A at a distance from the shore, of one or more cables E E or ropes extending from the shore to said post and back to the shore, and oil bags secured to said cables and adapted to be drawn from windlasses D D on the shore to the post.

In an oil-distributor, the combination with the oil tank or receptacle anchored at a distance from the shore, and means operated from the shore for permitting the escape of the oil, of one or more cables extending from the shore to the post, and having secured thereto supplemental oil bags or receptacles, adapted to be drawn toward the first aforesaid receptacle by operators on shore.



In an oil-distributor, the combination with the stationary post, erected in the water at a distance from the shore, of an endless rope or cable E extending therefrom to a point on the shore, and having attached thereto, one or more blocks endless cables passing through said blocks and extending to the shore, and oil-bags attached to the last said cables, and adapted to be drawn out toward the first aforesaid receptacle by operators on shore.



In an oil-distributer, the combination with the oil-receptacle having escape-vales, a post or support therefor, stays extending from the post to the shore, stays extending in an opposite direction to those aforesaid, and means for operating said valves from the shore, for permitting the oil to escape from said receptacle.

Another steering apparatus has been patented (No. 554,045) this time by George F. Woodman, of Newburgport, Mass., who filed his application Oct. 28, 1895. The claim is for the combination, in a steering device, of a winding drum, ropes coiled in opposite direction upon the drum, and a sleeve mounted up on the drum, sliding between and operated by the coils.

THE wrecking bill on the American Liner, St. Paul, is said to be about $100,000.

MARINE RECORD

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CLEVELAND, O., FEBRUARY 13, 1896.

THE Ohio Assembly seems to be considering the Naval Reserve question in earnest. Owing to the comparatively small amount of money required, it is believed that the State will be placed on an equal footing with other frontier states in this respect, and provision made for ten or twelve divisions. This is well from a standpoint of defense; but the benefits are incalculable in the practical education it gives in seafaring lines.

PRIVATE assurances from Washington have reached the vessel men from several sources, that the Detroit bridge bill is effectually dead, so far as piers in the river are concerned. The Senate may act upon it, and if sufficient influence is brought to bear to pass it through that body, it will undoubtedly meet defeat in the House. The latter action will save the bill from a veto at the hands of President Cleveland, whose views upon piers in navigable waters have already been forcibly expressed in his refusal to sign a similar bill for a New York bridge.

CAPT. LEONARD MELAN, of Helsingfors, Finland, is on the Great Lakes in the service of the Finland government, having been sent out by the grand duchy to study the system of ship building on the Great Lakes, particularly ice crushers. He will, it is said, recommend the style of boats used in crossing the Straits of Mackinac and the Ann Arbor car ferry line. A new ice crusher is soon to be built for the Bastic Sea and Gulf of Finland. The Russians and their neighbors are fully appreciative of America's merits and advantages in shipbuilding, and they will no doubt some day be turned to good account.

THE vessel interests have laid before Congress a telling agreement against a bridge at Detroit in securing the views of contractors and engineers as to the feasibility of constructing a tunnel under Detroit River. These gentlemen testify that a tunnel can be made for $3,000,000 to $3,500,000, and that the tunnel can be finished as soon as a bridge. True, the railroad people have brought up engineers who say a tunnel cannot be controlled, owing to quicksands which, they allege, abound in that vicinity. But such statements cannot long hold good when reputable and responsible contractors agree to do the work for the prices mentioned above, the highest of which is half a million dollars less than the cost of the bridge which the railroads wish to construct. The Detroit papers should cease howling for a bridge and begin to talk tunnel in the interest of their city, which would be benefited as much commercially by a tunnel as by a bridge. Industrially, as some one has well said, Detroit would be decidedly the gainer, as nearly all the work on a tunnel would have to be done on the spot, while a large part of the bridge work would be turned out in distant shops.

ANOTHER PLIMSOLL IN THE FIELD.

Congressman Phillips of Pennsylvania, Chairman of the House Labor Committee, has thrown the Woodman bill far into the shade by a measure which he offers for enactment. It is entitled "A bill to provide for the better managing and equipment of vessels on the Great Lakes."

All passenger and excursion steamers are to be manned as follows: Steamers from 150 to 300 tons register, one captain, one first mate or pilot, two wheelsmen, one lookout man, four junior seamen; from 300 to 500 tons, one captain, two mates or pilots, two wheelsmen, two lookout men and six junior seamen; from 500 to 1,000 tons, one captain, one first mate or pilot, one second mate or pilot, two wheelsmen, two lookout men, two watchmen and six junior seamen; all above 1,000 tons, one captain, one first mate or pilot, one second mate or pilot, two wheelsmen, two watchmen, two lookout men, one able seaman and five junior seamen.

All freight steamers to be manned as follows: From 150 to 300 tons, one captain, one first mate or pilot (first-class), two wheelsmen, one lookout man and three junior seamen; from 300 to 500 tons, one captain, one first-class mate or pilot, one second-class mate or pilot, two wheelsmen, two lookout men and four junior seamen; from 500 to 1,000 tons, one captain, one first-class mate or pilot, one second-class mate or pilot, two wheelsmen, two lookout men, two able seamen and three junior seamen; above 1,000 tons, one captain, one first-class mate, one second-class mate, two wheelsmen, two lookout men, three able seamen and three junior seamen.

All vessels, schooners and barges under sail, or schooners and barges under tow, from 150 to 300 tons, shall be manned as follows: One captain, one mate, three able seamen and one junior seaman; 300 to 400 tons, one captain, one mate, four able seamen and one junior seaman; 400 to 500 tons, one captain, one mate, five able seamen and one junior seaman; from 500 to 1,000 tons, one captain, one mate or first officer, one mate or second officer, six able seamen and one junior seaman; above 1,000 tons, one captain, one mate or chief officer, one mate or second officer, seven able seamen and one junior seaman.

Boards of examination, to consist each of one naval officer (active or retired) above the rank of lieutenant, and one clerk, are to be established at Buffalo, Oswego, Cleveland, Detroit, Port Huron, Milwaukee, Chicago and Duluth. They shall examine applicants for all places enumerated above, shall issue licences or certificates to those who pass, and charge the following fees for the same: Captain's certificate, $10; first-class mate or pilot, $10; second-class mate or pilot, $5; all others, $3. Examination shall be in seamanship, the same as that now used in the United States Naval Academy. Failure to comply will be punished by a fine of 50 cents per ton, 15 per cent of which goes to the examining officer, 10 per cent to the complainant and 75 per cent to the United States Treasury. No license or certificate shall be granted to anyone but a bonafide citizen of the United States. The sum of $15,000 is appropriated to carry this act into operation,

AMONG OUR EXCHANGES.

Mr. Henry S. Pickands contributes an excellent article on "Shipping on the Great Lakes" to the February number of the Yale Scientific monthly. Half a dozen illustrations show the steamer Yale loading coal at the Long Machine, Cleveland; the Kearsarge loading coal at the McMyler machine, Ashtabula; the passenger steamers Christopher Columbus and North Land, and the freight steamers Victory and Pathfinder.

Capt. M. de Puy has started a new canal paper, to be known as the Canal Protector, to be issued bi-weekly. He anuounces in the first number, dated January 29, that the journal will be devoted exclusively to canal protection.

In the March number of Harper's Magazine Park Benjamin will have an article entitled The Nerves of a War Ship, developing this featnre as illustrated in the delicate and complex internal machinery of the American cruiser, showing how the latest inventions have given its intimate operations an almost physical character.

Fowler Preston, of Benton Harbor, one of the best-known vessel owners and captains on Lake Michigan, died February 5 of kidney trouble.

APPOINTMENTS FOR NEXT SEASON.

The following appointments of masters and engineers for the season of 1896, have been announced by owners:

STEAMER.	MASTER.	ENGINEER.
Adams, Tom	Nicholson, Duncan	Kelly, James
Brown, F.	Nicholson, J. W.	Anderson, Nick
Brown, H. H.	Gatfield, E. C.	Hand, John H.
Cadillac,	Symes, John C.	Reese, F. J.
Chemung,	Robertson, Walter	Jordan, H. C.
Chisholm, Wm.	Call, Richard	Hunter, Silas H.
City of Alpena,	Lightbody, Matt.	Phillips, Armour
Cleveland (P.)	McLachlan, ——	Sergeant, J. M.
Detroit,	McKay, A. J.	Huff, Wm. S.
Glasgow,	McNeff, John	Price, C. R.
Mackinac,	Slyfield, H. J.	McDonald, Wm.
Paris,	Ballentine, E. D.	Pierce, E.
Straits,	McLachlan, Dunc.	Middleton, Jas.
Venice,	Houghton, F. P.	Pierce, D.
Cleveland,	Bennett, G. J.	Treleaven, Thos.
Cranage, Thos.	McNeil, J. S.	La France, M.
Clinton (Br.)	Morgan, Jas.	Ralfe, Thos P.
Cross, Belle	Cornwall, John	
Curtis (St. Sc.)	Curtis, A. L.	
Devereux, J. H.	Cleveland, Chas R.	Milne, Geo. B.
Doty, L. R.	Smith, Chris.	Abernathy, Thos.
Dyer, G. H	Jamison, Wm.	Robinson, George
Farwell, J. H.	Duncanson, D. J.	Johnston, John
Fedora,	Fick, F. A.	Stephens, John
Flower, R. P.	Van Patton, F. W.	Darcy, David,
Forest City,	Sanders, Joe	Erwing, John
Frontenac,	Murphy, S. N.	Barry, E. B.
Germanic,	Place, M. H.	Thorn, ——
Gettysburg,	Currie, S. H.	Weiner, W. P.
Glidden, J. N.	Lampoh, Jos.	Downing, Wm.
Hackett, R. J.	Sanders, Henry	Harkins, Daniel
Iosco,	Hutchinson, D.	Walsh, Thos.
Iroquois,	Jones, Thomas	Prince, E. W.
Jewett, H. J.	Huyck, F. B.	Howlett, J.
Kaliyuga,	Lowe, John	Blaine, Thos.
Kirby, S. R.	Girardin, D.	Watts, Wm.
Louisiana,	Moore, Truman	
Lansing,	May, A. C.	Coreyean, Jos.
Marshall, S.	Jean, August,	Leitch, A.
Mecosta,	Ennes, C. G.	Williams, Owen
Merida,	Ivers, John	Balfour, Jas.
Minch, P.	Young, Wm.	Nelson, Andrew
Mitchell, S.	Wilford, Thos.	Clancy, James
Neshoto,	Humphrey, W. H.	Malloy, Thos.
New York,	Dugan, John	Hill, R.
Nicholas, I. W.	Gerlach, Wm.	Miller, Wm.
Nipigon,	July, Edward	Francomb, Chas.
Niagara (Br.)	Morgan, James	Tetro, James
Nyanza,	McDonald, D. S.	Blanchett, J. R.
Onoko,	Johnson, W. H.	Bohland, A. G.
Outhwaite, J. H.	Burke, E. J.	Davidson, R. A.
Pabst, F.	Sullivan, D. C.	Bennett, James
Pawnee,	Davis, Ezra	
Pease, E. S.	Sloan, Thomas	
Peck, E. M.	Chamberlin, C. H.	Mercier, Emil
Pioneer,		Brown, Alex.
Pontiac,	Lowe, James B.	Kelly, Thos. B.
Prentice, J. H.	Comstock, J. N.	Smith, Christian
Queen of the West,	Debeau, C. J.	
Rhoda, Emily,	McCullagh, Geo.	
Rhodes, R. R.	Dowdell, P.	Mooney, Thos.
Richards, Rube	Vosburgh, L. G.	Brakeman, H.
Rochester,	Clossey. J. N.	Johnson, N.
Roumania,	Stone, Lewis N.	Burns, Martin
Samoa,	Stewart, W. W.	Minnie, Louis
Schlesinger, F.	Craine, D. P.	Fortier, A. N.
Spinner, F. E.	Laframboise, Jas.	Crook, A. R.
State of New York,	McAlpin. H.	Steen, Wm.
Ohio,	Smith, W. H.	Melroy, Anthony
Stewart, R.	Rice, W. E.	
Tampa,	Leonard, John	Murett, Chas.
Tioga,	Garden, W. P.	Fritsche, Geo.
Torrent (tug)	Cattanach, Alex.	Cronenworth, J.M.
Tuttle, H. A.	Young, C.	Donovan, W. E.
Uganda,	Wilson, C. H.	Mead, Wm.
Volunteer,	Rolls, Wm. H.	McCabe, P. B.
Wade, J. H.	Swartwood, C. M.	McMonagle, Geo.
Waldo, L. C.	Duddleson, John	Collins, Jerry
Whitaker, B.	Ames, A.	Blovett, D. W.
Whitney, D. C.	Critchet, D.	Lacy, Jos.
Wolf, W. H.	Graves, F. L.	Albrighton, Thos.
Yale,	Coulter. John	Stone, Harry

SCHOONER.	MASTER.
Arenac,	Davis, H. W.
Ashland,	Dennis, George
Barlum, J. J.	McKeighan, John
Barr, H. A.	Phillips, Harry W.
Brown, H. H.	Sanders, T. H.
Constitution,	Johnson, L.
Emerald (Br.)	Joyce, John
Fontana,	Harris, Henry
Grimsby (Br.)	Maitland, E. W.
Halsted,	Davidson, L.
Hartnell, G. E.	Jones, John
Hutchinson, E. C.	Woodward, T. K.
Lisgar (Br.)	Brooks, Henry
McGregor, Wm.	Hochrath, John
Magnet,	Blair, James
Melbourne,	Cooper, George
Middlesex,	Weimar, Paul T.

SHIP BUILDING AND REPAIRS.

LAUNCH OF THE SCHOONER MANDA.

Special Correspondence to The Marine Record.

Chicago, Feb. 12.

A very successful launch took place at the Chicago Shipbuilding Co.'s shipyard Saturday afternoon under the superintendence of Manager W. I. Babcock, of a splendid steel schooner of large dimensions, which was christened the Manda. She is being built for the Minhesota Steamship Co. Her dimensions are 367 feet over all, 44 feet moulded beam, 26 feet moulded depth. Her main hold is divided into three compartments, with double bottom four feet six inches deep, She will be schooner rigged, with 3 masts and will carry 4 sails. She is built on the channel system the same as the steamers Victory and Zenith City. She has a boiler to carry 125 lbs. steam pressure, electric lights, a steam ballast pump, a windlass and two capstans and will be rated A 1 for 25 years. WILLIAMS.

NAMES FOR THE NEW SHIPS.

The steamship building at the yard of F. W. Wheeler & Co,, West Bay City, for the Roby Transportation Co., is to be named L. C. Waldo, in honor of the secretary of that company.

The barge building at the Chicago Shipyard for the Northwestern Transportation Co., will be known as the George E. Hartnell.

The big steamer building at the Chicago yard for the Minnesota Steamship Co. will be christened Maricopa. Two steel schooners building for the same company have been named Manda and Martha. No names have yet been chosen for the twelve steamers of the Rockefeller fleet. but the whaleback steamer now building at the American Steel Barge Co.'s yard on builders' account will be named the Frank D. Rockefellar.

NEW WORK IN THE WIND.

The Standard Co.'s lake oil barges have operated with such signal success that this company contemplates the construction of a third and larger one, to be ready for operation by the spring of 1897. Lake shipbuilders have been asked to submit figures on a vessel some 250 feet in length.

There is some talk at Ashtabula of building a small boat for neighborhood passenger service. She would somewhat resemble the W. G. Harrow, of Cleveland, and would fish during the cooler months.

A NEW EXCURSION STEAMER.

Special Correspondence to The Marine Record.

Chicago, Feb. 11.

A light draft side paddle wheel excursion steamer for the St. Joe river in Indiana, will be built by the Marine Iron Works, of Chicago, and owing to the width of the hull (20 ft.) that portion of the work will be done where the boat is to be launched.

Tke machinery, which is now being built, will consist of a pair of long stroke paddle wheel marine engines, horizontal firebox marine boiler (Best's patent) allowed 145 lbs. steam pressure.

The Marine Iron Works contract to complete the entire job, launch the boat and start her in operation, supplying all necessarr fittings and equipment.

PROGRESS IN NEW YORK.

The work on the new ships for which the earlier contracts were placed last season is all well advanced, and in addition to the launches already reported several more will be placed in the water before long, Among them is the large new Mutual steamship, building at the Globe Shipyard, which will probably be launched inside of two weeks. The tug building at the Cleveland Shipyard is nearly ready for launching. The whaleback steamer and barge which the American Steel Barge Co. are building will likely be launched together within the next few weeks. Nothing in the way of launches may be looked for from Bay City, Toledo or Detroit for some time yet, although work at all these yards is very active. Boats building at Buffalo are well forward, and the Connors' Yacht Enquirer will be the first launched.

At the Detroit Dry-Dock Co.'s Wyandotte yard, Vinton & Co. have raised the frame for the new shop, 120 x 300 feet, which has been mentioned before. The new machinery is arriving, and will be installed as soon as the shop is enclosed. The keel has been laid for No. 124, and work is also being pushed on the lumber steamer for C. R. Jones & Co., of Cleveland. There are 375 men employed in the yard, working on night and day shifts. The machine operators work at night so as to have the plates ready to be placed on the boat in the morning.

At Marine City, Alex Anderson has the deck beams in place on the new boat building at his yard, and has begun to lay the deck planking.

A new steamer is being constructed at Charlotte, N. Y., by the Genesee River and Lake Ontario Steamboat Co. It will be christened the Ontario. It will be fitted with compound engines and will burn hard coal. The company is also said to be negotiating for the purchase of a large lake steamer to run between Charlotte and the Thousand Islands.

The new steamer being built by the Calvin Company at Garden Island is 125 feet long, and will cost about $5,000. The machinery from the steamer Traveler will be placed in the new boat.

The Starkes are gradually acquiring the ownership of the Milwankee Dry-Dock Co. The Thomas Davidson estate is said to have sold out to C. H. Starke, and the Vance interest to his son, F. C. Starke.

W. & M. CAR FERRY BARGES.

Craig & Sons, of Toledo, are getting a start made on the two car ferry barges which they have contracted to build for the Lake Michigan Car Transportation Co. These transports will be built entirely of oak, and will cost about $70,000 each. They will differ somewhat in appearance from the barges turned out for this line last year. The pilot house will be elevated, to give additional space for cars on deck. They will be 316 feet long by 46 feet beam, the latter dimension being two feet greater than that of the old barges, while the length is the same. The new tug which the Craigs are building to tow the barges will be 140 feet long, with triple-expansion engines which will develop 1,200 horse power. Her cost will be about $75,000, and she will be named in honor of President H. M. Fischer. The tug Perrett, which the company bought lost year, is receiving new boilers. A small harbor tug will also be purchased.

This company, which was organized for the purpose of gaining the equivalent of a rail entrance into Chicago from Peshtigo, 240 miles distant, has hit upon a novel plan for accomplishihg its objects to the full extent originally desired. The transports cannot get into Chicago river, and have had to land the cars at South Chicago, cars for the city proper being taken in over the Belt Line. This involved both delay and extra expense, to end which the company have decided to build two lighters of the ordinary type, but with capacity and displacemen to carry 12 loaded cars. These will operate between the Calumet and the Chicago River. The company has leased the dock in Lighthouse Slip, near the inner harbor entrance, fornerly occupied dy the Seymour Northern Michigan line, and is fitting it up for the trade.

GENERAL REPAIR WORK.

CHICAGO—At Miller Bros.' shipyard the steamer City of Berlin is in dock receiving considerable new bottom planking, new garboard strakes, a new piece of keel forward, some re-calking and a new wheel. The schooner Annie M. Ash is in dock for some new plank on her bottom, a piece of new keel and a new stern. The steamer John Harper is at the derrick having her mainmast taken out, her foremast placed farther forward, and her mizzenmast farther aft. She is getttng two new full hatches put in, also some new floor, and having her ceiling re-calked. The barge J. H. Rutter is receiving new deck beams and deck, new hatch coamings and hatches, and a thorough re-calking.

At the Chicago Shipbuilding Co.'s yard the steel steamer Alva was in docks and received several new floor frames and plates on her bottom.

J. B. Bates & Co., shipbuilders, are putting a new deck house, forward, on the schooner Peshtigo No. 2; some new deck beams on the steamer Mecosta; some new floor and general repairs on the steamer Iron King; some new slaunchions and rail aft on the steamer Geo. W. Robey; part new after cabin and new skylight on the steamer Iron Chief; some general repairs and calking on the steamer Pasadena. WILLIAMS.

CLEVELAND.—The car ferry Shenango No. 2 was unable to get into either of the dry docks here and will have to go to Toledo for her repairs which consist chiefly of two new wheels. The Olympia is in the Ship Owners' dry dock for repairs to damage caused by ice, and new blades on her wheel.

The tug Thos. Monson was in the Cleveland dock for repairs to her shoe.

MONTREAL—The management of the Richelieu & Ontario Navigation Company are placing everything in order for the opening of the season. While no new vessels are being constructed, extensive additions and alterations are being made in several of the Company's boats. The Berthier is having a new bottom and also new boilers. This boat will be run as usual between Three Rivers and Montreal when the steamer Three Rivers is engaged with the pilgrimage excursions, which have become such a feature of late years. The ferry-boats Longueuil, Hochelaga and LaPrairie are also being overhauled. The twin screw steamer Columbia will be kept as an extra boat as she was last year.

DETROIT—The Northern Wave's repairs are so nearly completed that she will be floated in a few days. Her repair bill will be nearly $75,000. From 150 to 200 men have been working on her since the close of navigation. She is the largest repair job ever known in lake insurance. As soon as she leaves the Detroit dry-dock the Selwyn Eddy will go in for extensive repairs to her bottom. The steamer Fryer has almost been rebuilt. The steamers Progress and Wisconsin are receiving new boilers and getting a general overhanling.

At the Clark dry-dock the steamer Fayette Brown has been cut in two and the parts are being separated so that an additional 50 feet of length may be put into her. About 100 men are working on her. The smaller basin is occupied by the Louis Pahlow, which is receiving a practical rebuild above the water line.

MILWAUKEE—The steamer Comorant, which lay idle at Milwaukee all last winter, was sold by the Winslow estate to J. L. Crosthwaite of Buffalo about two weeks ago, and has gone into dry-dock for a thorough topside rebuild from about four strakes below the plank sheer. The house forward will be torn out and rebuilt and other minor work is to be done. The schooner Scotia is in the stationary dock at the south yard for a partial refastening, some calking, and minor repairs.

REPAIR NOTES.

M. Freiman, of Green Bay, who recently bought the City of Baltimore for $3,000, will shift the engine and boiler aft, and convert her into a coarse freighter for the Green Bay trade.

The Escanaba Towing and Wrecking Co.'s tug Monarch is receiving alterations and improvements under the supervision of Capt. Nyhagen, of Manitowoc.

The tug Temple Emory is receiving a thorough rebuild from the water line up, at Two Rivers, Wis. This includes new deck beams and deck, covering-board, rail, stanchions, and an entire new house. The engine is also receiving a general overhauling.

The loss on the steamer Idler, which burned at Toledo a few months ago, will probably soon be adjusted. It is not known just how badly she is damaged or whether she will be rebuilt, If rebuilt, she will likely ply between Sandusky and Johnson's Island next season in the excursion trade.

M. P. Lester, of Marine City, has secured the contract of rebuilding the wrecked steamer Britannic which is now lying at Port Huron. He went to that port Monday morning with a gang of men to commence work.

VESSEL TRANSFERS AT GRAND HAVEN.

The following transfers of vessel property have been recorded at Grand Haven: Steamer Myrtle M. Ross—Volney Ross, of South Haven, to Joseph F. Smith, of South Haven, one-half, $1,500. Steamer Pine Lake—Charlevoix Lumber Co. to Capt. Ephraim Small, of Milwaukee, a fractional interest for $2,750. Steam yacht Mary—James Stevenson, of St. Ignace, to Michael Murray, the whole, $1,000. Steamer Edward Buckley—William J. Nuttal to Edward Buckley and William Douglas, fractional iuterest for a nominal consideration. Scow Dan Hayes—Andrew Anderson, of Manistee, to Ole A. Olson and James Nelson, one-half, $100. Steamer Maud Lilley—Richard A. Seymour to Thomas Collins, of Manistee, the whole, $300. Steamer Erie L. Hackley—D. E. Staples, et al., to Ray E. Alberts, of Muskegon. the whole for a nominal consideration.

TRIPLE-EXPANSION ENGINES OF THE INDIANA.

A large illustration and a description of the U. S. Battleship Indiana appeared in the RECORD of November 14. This week, through the courtesy of the American Society of Naval Engineers, we are enabled to present an engraving of one of her duplicate triple-expansion engines.

These are two vertical inverted, direct-acting, triple-expansion engines placed abreast of each other in separate water tight compartments, the high pressure cylinders being forward.

Each cylinder is supported by an inverted Y frame on one side, and by two hollow forged steel cylindrical columns on the other. The intermediate and low pressure cylinders are steam jacketed on the sides and bottom, but the high pressure are not, but are fitted with working liners. There are no starting valves on the cylinders, provision being made for starting the engines by admitting live steam to the receivers. The relief valves for the cylinders are placed on the valve chest casings, on connections between the steam and exhaust sides of the main valves. There are two receivers for each engine, consisting of exhaust pipes and valve chests, the safety valves of which are set at 100 pounds for the I. P. and at 60 pounds for the L. P. The main valves are of the single ported piston type, there being for each engine, one for the H. P. and two for the I. P. and four for the L. P. cyllnder. They are provided with balance pistons, the cylinders of which form part of the upper covers of the valve chests. The valve gear is of the Stephenson type with double bar links. There are no independent cut-off valves, but provision is made to cut off in each cylinder, varying from .5 to .7 of the stroke, by means of a block to which the suspension links are attached, which block can be moved by hand screw gear in a slot in the end of the arm on the reversing shaft.

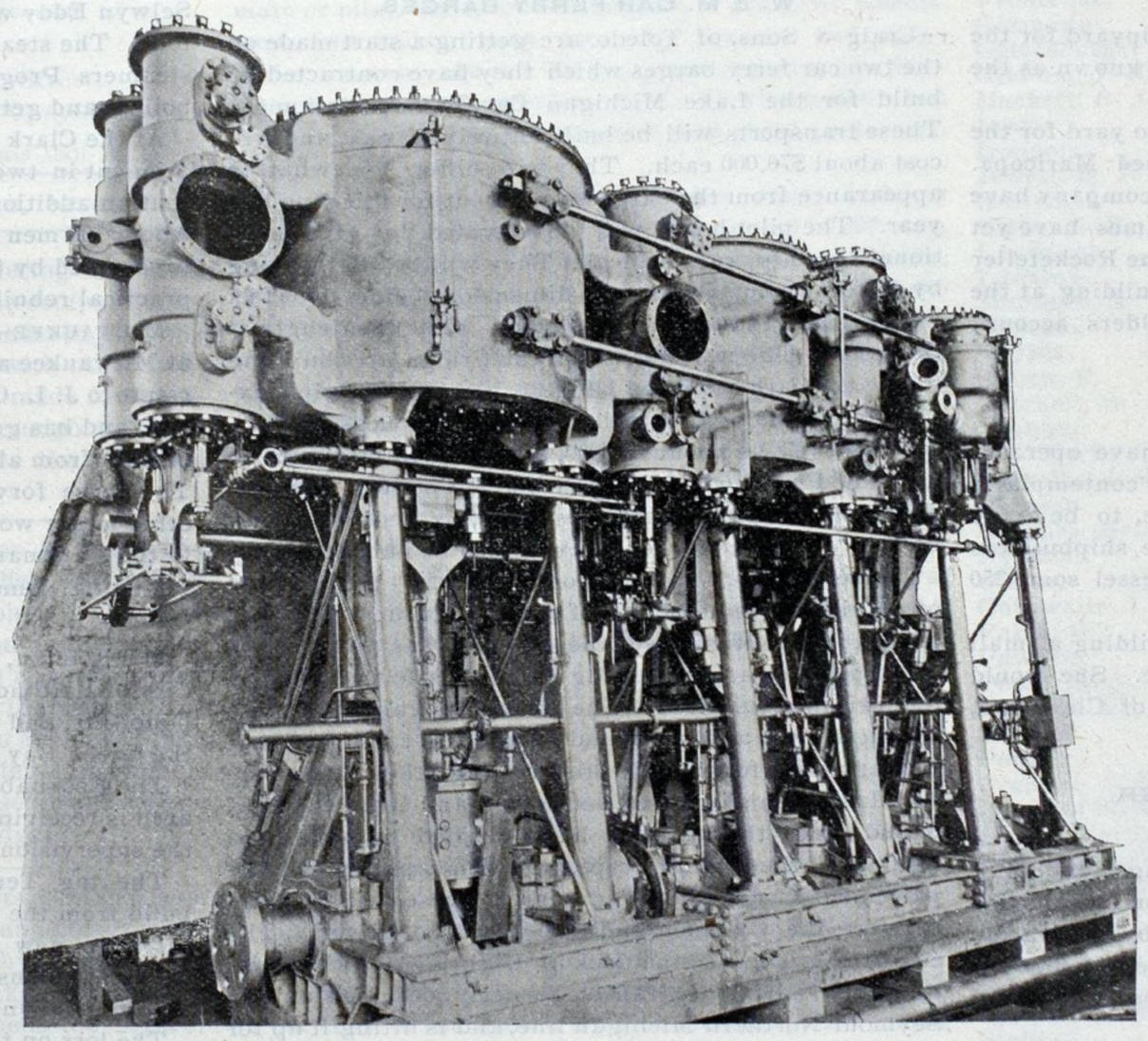
The main pistons are steel castings, dished, and each are fitted with two packing rings 5/8 inch wide and 3/4 inch thick. The piston rods and connecting rods are of forged steel. The cross-heads are of forged steel, and each has a manganese bronze slipper, the sliding faces of which are fitted with white metal. The crosshead guide to take the thrust when going ahead is of cast iron bolted to the inverted Y frame. The back of the guide is recessed and covered with wrought-iron plates to form a passage for circulation of water. Cast iron lips are bolted on each side of the go-ahead guide to take the thrust when backing. The eccentrics are of cast iron. Each backing eccentric is securely keyed on the shaft, and each go-ahead eccentric is secured to the corresponding backing one by through bolts in slotted holes. The eccentric straps are of composition, faced with white metal, and the eccentric rods of forged steel. The I. P. and L. P. valve stems have manganese bronze crossheads which take hold of the link blocks directly. Each engine bed plate consists of three sections of steel castings. The steam reversing gear consists of a cylinder 14 inches in diameter and 20 inches stroke, secured to an engine Y frame, the piston rod being connected to an arm on the reversing shaft. The valve is moved by a hand lever and is controlled by a floating lever. The hand reversing gear consists of a wheel, worm shaft, pinion and rack, the latter being connected to an arm on the reversing shaft.

There is a double cylinder, simple, inverted, turning engine with cylinders 7 inches in diameter and 7 inches stroke, secured to the high pressure Y frame. It drives a worm wheel on the forward end of the high pressure crank shaft by means of worm gearing and a second worm; the latter is made to slide on a feather key, and is held in place by a collar below and a removable key above it. A ratchet is fitted to the shaft of the engine for turning by hand.

Each main engine is fitted with a disc stop valve 13¼ inches in diameter, having a screw stem and a balance piston, and a butterfly throttle 15⅛ inches in diameter. The main steam pipes are of copper and strengthened with steel bands 6 inches apart.

In the port engine room there is a distributing oil tank supplied from the main oil tanks by a Brake duplex pump, steam cylinders 2 inches in diameter, oil cylinders 1¼ inches in diameter, stroke 2¾ inches. The tank is fitted with an overflow pipe. Distributing pipes lead to to the various manifolds, which are fitted with adjusting valves, and from the manifolds tubes lead to the various parts to be lubricated. The suction pipe of the pump is fitted with a strainer.

Cylinders, number for each engine		3
diameter of H. P., inches		34 7-16
diameter of I. P., inches	Starboard	48 3-32
	Port	48
diameter of L. P., inches		75
Stroke of pistons, inches		42
Valves, diameter of H. P. (one for each cylinder), inches		17
diameter of I. P. (two for each cylinder), inches		17
diameter of L. P. (four for each cylinder), inches		17
Balance pistons, diameter of H. P., inches		5¼
diameter of I. P., inches		5¼
diameter of L P., inches		7
Valve stems, H. P. [1] diameter, inches		2⅝
H. P. [1] diameter through valve, inches		1¾
I. P. [2] diameter, inches		2⅝
I. P. [2] diameter through valve, inches		1¾
L P. [4] diameter, inches		2⅝
L P. [4] diameter through valve, inches		1¾
Main steam pipe [13 inches diameter] area of cross section, square inches		132.73
Exhaust pipe to I. P. cylinder [16½ inches diameter] area of cross section, square inches		213.82
to L. P. cylinder [20½ inches diameter] area of cross section, square inches		330.06



TRIPLE EXPANSION ENGINE U. S. S. INDIANA.

to condenser [2] [18½ inches diameter] area of combined cross sections, square inches			537.6
Volume swept by H. P. piston per stroke, cubic feet			22.17
I.P. piston, per stroke	Starboard	cubic feet	43.69
	Port	cubic feet	43.51
L. P. piston, per stroke, cubic feet			106.91
Ratio of net area of H P. to I. P. pistons			1.97
I. P. to L. P. pistons			2.45
H. P. to L P. pistons			4.82
Clearance of H. P. cylinder, per cent	Starboard	Top	14.76
		Bottom	24.33
	Port	Top	14.76
		Bottom	24.33
Clearance of I. P. cylinder, per cent	Starboard	Top	12.03
		Bottom	22.88
	Port	Top	12.10
		Bottom	22.05
Clearance of L. P. cylinder, percent	Starboard	Top	9.09
		Bottom	19.59
	Port	Top	9.09
		Bottom	19.28
Piston rods, diameter, inches			7
length from piston to crosshead, feet and inches			5-5⅝
Connecting rods, length from center to center, feet			7
diameter of upper end, inches			6⅜
diameter of lower end, inches			8½
thickness [si es as faced], inches			6⅝
crosshead bolts [4], diameter, inches			3
crank pin bolts [2], diameter, inches			4¼
Crossheads, surface [ahead], square inches			446½
surface [backing], square inches			352½
pins, diameter, inches			7½
pins, length, inches			9⅛
Reversing gear, steam cylinder, diameter, inches			14
stroke, inches			20

THE MARINE RECORD is the repository for all engineering and nautical publications. Hydrographic charts always on hand.

TRADE AND INDUSTRIAL NOTES.

Mr. J. S. Mundy of Newark, N. J., the Hoisting Engine builder, has a contract for the New York Central and Hudson River Railroad for building their new drawbridge engine for the Spuyten Duyvil Creek draw. This drawbridge has a span of 290 ft. The engine has double cylinders with reverse link motion and operates two lines or steel shafts, 4¾ in. in diameter, by gearing for opening and closing the draw. The engine is specially arranged for operating their temporary lift draw that is now in use across the Spuyten Duyvil Creek, and as soon as the permanent drawbridge is erected will be transferred to the new draw. All the material entering into the construction of this engine is of the highest grade, and workmanship of the very best.

Blocks for the Holland submarine torpedo boat have been laid by the Columbian Iron Works, says the Baltimore Sun, and Mr. Holland, the inventor of the beneath-the-sea destroyer, is prepairing the working drawings. Most of the frame of the boat is bent. She is to be 84 feet long and 11 feet diameter. All the frames for the three 160-feet-long torpedo boats are ready for erection and the machinery is almost ready to be assembled. L. H. McMutrie, late of the shipbuilding department of the Maryland Steel Company at Sparrow's Point, is now at Seattle, Washington, superintending the construction of a torpedo boat similar to those for which the Columbian Iron Works has a contract.

Hinkle Furnace, of the Ashland Iron & Steel Co., of Ashland, Wis., eclipsed in 1895 all its previous records of production, turning out 40,631 gross tons of charcoal pig iron in 350 days' running time, or an average of over 116 tons per day. This is the largest quantity of charcoal pig iron ever produced by a single stack during a similar period of time in this or any other country. The next best year's work of the furnace was 38,304 tons, made in 1892. Noah W. Gray is manager of the furnace and L. E. Dunham is assistant manager.

L. Boyer & Sons, No. 90 Wall street, New York, have sent out a new descriptive catalogue of the Boyer Patent Sectional Water Tube Boiler. This boiler, as stated in the catalogue, is made for steam vessels of all sizes, from the smallest launch to the ocean greyhound, and also for stationary and portable purposes. The catalogue also contains an illustration of the fast steam yacht Rex, which is fitted with a Boyer boiler.

The Joseph Dixon Crucible Co. is sending out a valuable circular to customers in regard to the proper treatment of crucibles. It is carefully and well written by John A. Walker, of Jersey City, vice president of the company, and contains much valuable information. The properties and circumstances which cause crucibles to crack or scalp, shortening their lives, are fully set forth.

It is reported that surveys have been made at Lewiston, N. Y., on the Canadian side, for a railway suspension bridge to span the gorge between Lewiston and Queenstown, Ont. The Niagara Falls Park Railway Co. and the Gorge Electric Road are mentioned in connection with the project. American and Canadian companies already possess charters for the construction of a railway bridge at this point, and the matter of building it will be decided in a few weeks.

At the annual meeting of the Carnegie Steel Co., Limited, held in Pittsburg, the following board of managers was elected: H. C. Frick, John G. A. Leisham, W. H. Singer, H. M. Curry, F. T. F. Lovejoy, L. C. Phipps, John Pentefract, Charles M. Schwab and Alex. R. Peacock. The board organized by selecting H. C. Frick as chairman; John G. A. Leisham, president; L. C. Phipps, vice-president and treasurer; F. T. F. Lovejoy, secretary.

The additions to the plant of the Springfield (Ohio) Machine Tool Co. are now completed and with the new tools installed the plant becomes one of the most complete machine tool manufactories in the country. The

new addition to the shop is 50 x 100 feet. The new company also has a foundry and makes castings for a number of the fine machine tool manufactures of the country.

The Bath, Me., Iron Works are building a steam yacht, the Illawarra, for Eugene Tompkins, of New York. She will be 121 feet over all, 106¼ l. w. l., 18½ beam and 10½ feet deep. Her triple expansion engines measure 11, 19 and 30 inches by 18 inches stroke, and she will be equipped with two Almy water-tube boilers, With 300 pounds working pressure.

According to the Boston Standard, a company of Pennsylvania and New Jersey men, with a capital of $2,5000,000, has been formed to erect and equip an extensive shipbuilding plant in South Boston. The head of the firm will be Benjamin Hollingsworth, and E. B. Price, an iron merchant of Philadelphia, is named as treasurer.

The Bethlehem Iron Co. shipped to New York last week a new connecting rod for the steamship Saale, of the North German Lloyd Line. The rod weighs 10,000 pounds and was one of the greatest and quickest jobs in steel work that was ever undertaken in this country. The work was completed in two weeks from the receipt of the order.

The Bethlehem Iron Works' steel rail mill has resumed operations, giving employment to a large number of men. The company is pushing work on government contracts. Four large turret plates for the battleship Oregon were shipped last week to the Union Iron Works at San Francisco.

The following corporation returns have been filed with the City Clerk, of Providence, K. I.: American Ship Windlass Co., capital stock all paid in, $100,000; real estate taken at assessors' valuation, $53,780; personal property, $198,848; liabilities, notes and accounts payable, $34,368.98.

The catalogue, for 1896, of the Morris Machine Works, Baldwinsville, N. Y., has just issued from the press. It contains illustrations of the company's different style of centrifugal pumps, including pumps for circulating water through surface condensers aboard steamships, and special wrecking pumps, with or without engines.

The Senate bill providing for increasing the capital stock of the Newport News Shipbuilding and Dry-Dock Co. from $3,000,000 to $6,000,000 passed the Senate, and was at once communicated to the House. On motion it it was taken up, out of order, placed on the calendar and subsequently passed.

The Union Steam Forge Company of Bordentown, N. J., have just completed the stern frame and rudder for the steamship Irrawaddy, which was stranded on the Jersey Coast some time since. This stern frame weighed 17,000 and the rudder 8,000 pounds.

The Maryland Steel Co., of Sparrow's Point, Md., have been added to the list of manufacturing agents of the Case Outward Thrust Propeller. They will make a large Model D. wheel at once for a large passenger steamer.

Gardner & Cox, of 1 Broadway, New York City, have designed a steel schooner yacht, to be 90 feet long over all, 65 feet on the water line and 18 feet beam, to be built by T. S. Marvel & Co., of Newburgh, N. Y.

The cost of Pintsch gas buoys, referred to at length a couple of weeks ago, is about $1,400 apiece. It costs $26 to fill the buoy with gas, but it lasts six to eight months.

C. A. Tatum's steam yacht Cosette will receive an Almy water tube boiler. This yacht was formerly owned by C. C. Worthington of Irvington, N. Y.

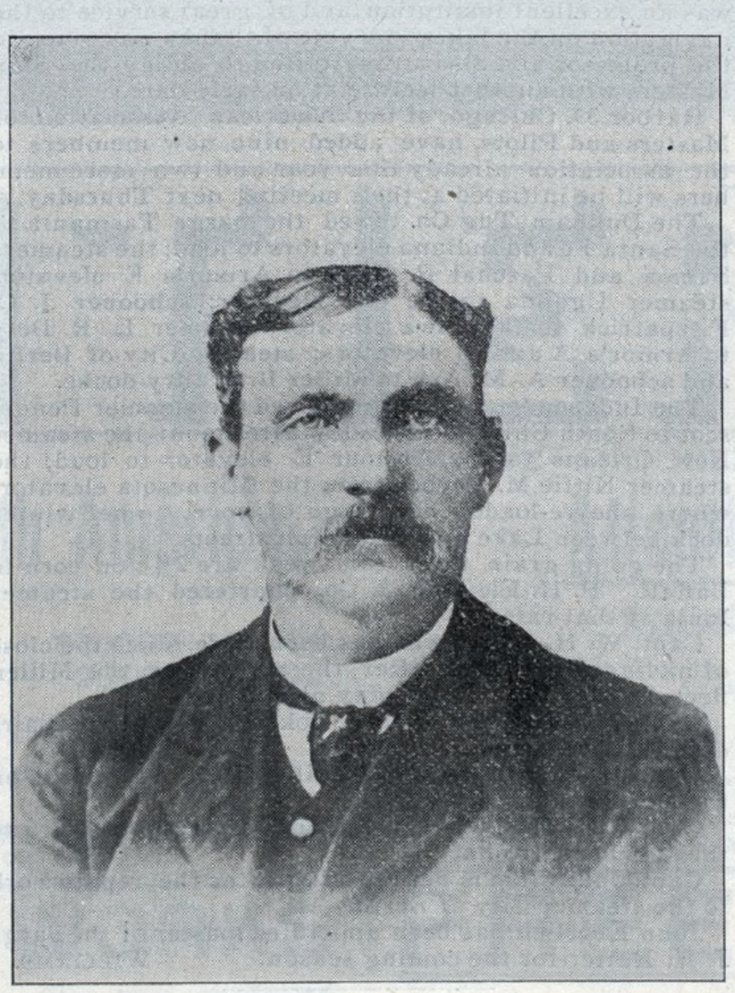
SCRIBNER'S MIDWINTER OUT:DOOR NUMBER.

Scribner's Magazine for February contains an unusual number of articles on life and adventure in the open air, including a paper on "The Colorado Health Plateau," by Lewis Morris Iddings, and illustrated by Orson Lowell; "Hunting the Musk-Ox with the Dog Ribs," by Frank Russell; an account of a trip into the barren lands of northwest Canada; "The Ascent of Mt. Ararat," by H. F. B. Lynch, and illustrated from photographs taken en route. The great Spanish artist, Vierge, furnishes the frontispiece and other illustrations. The tenth installment of President Andrews's history is called "The Neo-Republican Ascendancy," describing the close of the first Cleveland administration, the Republican victory in 1888, the "Billion Dollar Congress," the McKinley bill, the Johnstown flood, and the lynching of Italians in New Orleans. The departments contain such attractive articles as "Decoration Painting in America," and "Museums." Some attention is given to the prophet Schlatter and the recent boom in Kaffir stocks.

MARINE RECORD Life Savers' Series.

CAPT. JOHN HANSON.

The natural sailing ability and prowess on the seas of the ancient and modern Scandinavian races is well known, and is strikingly exemplified in the instance of Capt. John Hanson, keeper of the life-saving station at Manistee. He was born at Wisby, Sweden, Dec. 27, 1855. He spent his boyhood at home, but went to sea when in his fifteenth year. He sailed for several years in Swedish, German, Spanish and English vessels. making two trips around the world. After this thorough apprenticeship in the work of a practical seaman, he returned to his home and entered the government navigation school. After three years of steady applicalion he received a master's certificate to command vessels in the merchant service, and again went sailing as first officer and master, making another trip around the world. He was shipwrecked several times and after a time settled down on the eastern coast, where he remained five years. He then went to Manistee, Mich., in 1887, to visit a brother and sister, and deciding to remain, entered the life-saving crew at that port as surfman, receiving his appointment as keeper two years later. Capt. Hanson.



CAPT. JOHN HANSON.

while he has had a great deal of experience, and has seen much of the world, is still in the prime of life, and from all signs will prove of the utmost service to the work in which he has enlisted his energies, for a score of years to come.

NOTES.

How to man sixty battleships and three hundred cruisers, gunboats and torpedo vessels of the British navy in the event of war is a problem which is seriously agitating the British Admirality.

HOWE E. DANZENBAKER has designed a new model for an ice crusher. It has an oblique ram bow intended to be forced under the ice and lift it up, throwing the pieces aside as the boat proceeds with its 4,000-horse-power engines. The boat might be used for harbor defense, and if constructed with this view would cost $250,000.

THE Neafie & Levy Ship Building Co. has begun the construction of a steamboat which, it is claimed, will be a veritable floating palace, as well as a substantial freight vessel. It is being built for the Menendez Co., of Havana, and is to trade between the United States and Cuban ports. The Menendez Co. are the largest shippers and importers in Cuba, and the new vessel will be added to the line of steamers it now owns. She will be of steel, 250 ft. 8 in. long, 35 feet beam and 20 feet deep.

PROPOSED LAKE LEGISLATION.

The following bills, which have been introduced in the House of Representatives, will affect or interest those engaged in Lake Commerce:

1464—By Mr. Curtis, of New York—To amend Chapter 76, laws of 1893. (Extends time for completion of a bridge over the St. Lawrence River.)

2751—By Mr. Mahany—To provide for the construction of a bridge or tunnel across Niagara River.

3810—By Mr. Corliss—To provide for the construction of a bridge across the Detroit River at Detroit.

3824—By Mr. Woodman—To provide coast defenses for the sea and lake ports of the United States.

3831—By Mr. Dazell—To incorporate the Lake Erie and Ohio River Ship Canal Co., and defining the powers thereof.

3947—By Mr. Mahany—To appropriate $500,000 to begin the work of completing the Buffalo breakwater.

4242—By Mr. Cobb, of Missouri—To amend Section 4426, title 52, R. S., to require ferry boats, canal boats, and other small craft of like character, propelled by gasoline, gas fluid, naphtha, or motor power, to be inspected under the provisions of this title.

4331—By Mr. Woodman—To regulate the manning of vessels on the Great Lakes.

4440—By Mr. Mahany—For the necessary and better protection of American labor and the enforcement of the law of domicile and the restriction of immigration to such a degree as will serve that end.

4572—By Mr. Walker, of Virginia—Amending Section 6 of an act entitled, "An act making appropriations for the construction, repair and preservation of certain public works on rivers and harbors, and for other purposes."

4705—By Mr. Arnold, of Pennsylvania—Making an appropriation for the construction of an electrical cruiser and to provide electrical equipment for one or more cruisers already in service.

4707—By Mr. Dockery—Appropriating $50,000 for the relief and protection of American seamen in foreign countries, and shipwrecked American seamen in the territory of Alaska.

4879—By Mr. Burton, of Ohio—Relating to the anchorage and movements of vessels in St. Mary's River.

4782—By Mr. Avery—To establish a life-saving station at or near Charlevoix, Mich.

4787—By Mr. Northway—To establish Conneaut as a sub-port of entry in the Cuyahoga customs district.

4798—By Mr. Woodman—To establish an additional navigable channel from a point on the north branch of the Chicago River to Lake Michigan.

4809—By Mr. Burton, of Ohio—Appropriating $17,000 for repairs and additions to the U. S. Marine Hospital at Cleveland.

4989—By Mr. Curtis, of New York—Establishing gas buoys in the St. Lawrence River, one at or near each of the following named places: Charity Shoals, Featherbed Shoals, Rock Island Point, Sisters Island Light, Sunken Rock, Bay State Shoals, and the Lower Narrows.

5762—By Mr. Burton, of Ohio—Appropriating $880,000 for rebuilding, where necessary, and for making necessary repairs to the breakwater and two piers in the harbor of Cleveland.

5288—By Mr. Low—To prohibit advances and regulate allotments of wages to seamen.

5362—By Mr. Stephenson—Appropriating $5,000 for establishing a lighthouse on Peshtigo Reef, near Peshtigo, Wis.

5363—By Mr. Stephenson—Appropriating $5,000 for a fog signal on the north pier of the entrance to Menominee, Wis.

5364—By Mr. Stephenson—Appropriating $5,000 for a fog signal at Ottawa Point, near East Tawas.

5365—By Mr. Stephenson—Appropriating $5,000 for a lighthouse on what is known as the Whaleback, near Cedar River, Mich.

5381—By Mr. Cook, of Wisconsin—Authorizing and directing the Secretary of War to erect and maintain flushboards on the Menasha Dam, in Fox River, Wis.

5475—By Mr. Henderson—To provide for the punishment of offenses on the high seas.

The following bills have been introduced in the Senate:

564—By Mr. Frye—Providing for the collection of fees for furnishing certificates of title to vessels.

565—By Mr. Frye—Providing for the establishment and enforcement of rules and regulations for the use of United States canals and similar works of navigation, and for other purposes.

924—By Mr. McMillan—To provide for the erection of a bridge across Detroit River at Detroit.

1646—By Mr. Frye—Providing for certain requirements for vessels propelled by gas, fluid, naphtha, or electric motors.

At its annual meeting, the Canadian Marine Association commended the action of the government looking toward improved water communication. The rates of wages and freight tariffs for the coming season were also decided upon. The election of officers resulted as follows: President, R. C. McKay, Hamilton; vice-president, W. A. Geddes; secretary-treasurer, J. G. Trowell; executive commitee, Capts. Crangle, Gaskin, Fairgrieve, Sylvester, S. Neelon, and Messrs. J. B. Miller, C. A. Jacques, and D. G. Thompson.

NEWS AROUND THE LAKES.

BUFFALO.

A NEW FLOUR LINE FROM DULUTH TO BUFFALO—THE GORDON PROJECT NEARLY AT A HEAD—CAPT GEO. MCLEOD AS A MASCOT.

Special Correspondence to The Marine Record.

BUFFALO, Feb. 11, 1896.

There is great interest in the efforts to place the season's ore contracts. Capt. James Davidson admitted when down here last that he had taken 100,000 tons at $1 last fall, but says it is so fixed that he can carry it all before the end of October, which he thinks is a pretty good thing.

Buffalo has very little ore left on dock and Tonawanda is out, so that for some time it has been brought to the furnace there by rail, probably from Ohio. There is a chance for some good figuring on the Tonawanda business and no doubt some has been done before this time. The doubling of that furnace capacity ought to insure at least a $400,000-ton ore business to Tonawanda this season.

Not a word is said about coal carrying yet, and nothing is likely to be said till the ore rate is made, though the reason is mainly on account of the slow market for coal all winter, consequent on the mild weather. The companies are not likely to be in any hurry to move hard coal.

Capt. George McLeod went to New York while the American Liner St. Paul was on the beach at Long Branch. Being a veteran wrecker he naturally went down to see her, just as a duck drops into the water when it strikes any. But Capt. McLeod did not start soon enough to be a spectator to the helplessness of the monster. Just as the boat he was in came in sight of the steamer she floated. It was a clear case of mascot on the part of the captain. If he had stayed at home it is to be feared that the big steamer would still be on the shore of Jersey. He don't say much about the affair, save that he wasn't in it.

There was a meeting on 'Change Monday to take action against the proposition to get the State to take the Niagara bridge to Grand Island in hand and build it, as it is all on State property and needs no international diplomacy. But the Warren bill in the legislature purposes to build it 125 feet high, and make it so expensive and carry it so far inland on the low island shore that nobody wants it, so it might as well be killed at the start. There are many ideas on the matter that it seems certain that the poor islanders must remain separate from the rest of the world a while longer. The Congressional Committee that has the matter in hand declines to come to Buffalo to look the situation over.

The Northern Line appointments still hang fire, and there are a few more guesses out as to the men who are to handle the passenger boats. Captain Brown, who is to make the appointments, is ill, and has not been at his office for some days.

There is nothing doing in the harbor but some little shifting of vessels to and from the dry-docks. The steamer Queen of the West, which has been receiving a boiler, comes out now and the Connemaugh goes in. The boiler came out of the Calumet, that was lost below Chicago some years ago. The change has made it necessary to increase the size of the shaft. The Conemaugh receives only ordinary repairs.

Capt. J. J. Clark, the Detroit marine insurance agent, has been here nearly a week, attending the meeting of the western fire insurance agents. It was a very warm gathering at times, especially when the question of agents' percentages came up. Once at least the meeting had to adjourn and appoint a committee to take up the question. It appears that several of the city agencies have enjoyed special privileges in regard to rates and it was thought to be time to bring them into line. Hence these tears.

The new lake line reported last week is not the one John Gordon is looking after, but is a flour line from Duluth to Buffalo, made up of the Ford, Hodge, Saginaw Valley and possibly the Nyack, so a third party says. It is to be managed by H. B. Earhart, of Duluth, who used to be in the ship brokerage business there with John C. Fitzpatrick. The Duluth millers appear to be behind the scheme and may make it go. Mr. Gordon may be ready to make an announcement in a few days.

The lake-line managers hold a meeting about once a week, but appear to be making very little progress towards a new combination. There is a lot of sparring going on though, so that they manage to keep up a good circulation by the means, if nothing else. At today's meeting there was a chorus of announcements that the members were getting ready to leave town, so hostilities are likely to be suspended for awhile. The combination is held to be certain enough to happen, but the percentages, which are the real sticking point, are not even reached yet.

Secretary Keep, of the Lake Carriers' Association, is helping out a big descent of vessel men on the Detroit River bridge scheme, though the attack is made more under the auspices of the vessel owners at large than through the association. It appears to be the impression that the bridge is about as good as dead, if argument goes for anything. The wonderful growth of the lake trade is finally brought up by the discussion for it is shown that a bridge of 1,000 feet span is now a greater obstruction to the river than one of 400 feet span was seven years ago. The vessel men are standing firm against any bridge with piers in the river and seem to have the best of the argument.

The following masters will sell the Union Steamboat Co.'s fleet next season: Chemung, Walter, Robinson, Owego, John Byrne, Tioga, W. P. Garden, H. J. Jewett, F. B. Huyck, Rochester; J. N. Clossey, New York; John Dugan. CHAMBERLIN.

CHICAGO.

A HIGHLY APPRECIATED LECTURE ON "OLD PROBABILITIES" TO THE CAPTAINS—MASTERS AND PILOT'S GROWING RAPIDLY.

Special Correspondence to The Marine Record.

CHICAGO, Feb. 11, 1896.

Professor Garriott, of the Weather Bureau, gave a very interesting lecture on "Weather Probabilities" to members of Branch No. 3, of the Ship Masters' Association, and a number of visitors in their hall over Le Grand Hotel, corner Kinzie and Wells streets, last Wednesday afternoon. The lecturer described very lucidly the means by or from which the probabilities were ascertained, and entered into discussion with many members of the association in answer to questions asked by them. Those present were much pleased with the lecture and the professor's instructive explanations and went away impressed that the weather bureau was an excellent institution and of great service to the navigation on the lakes. A vote of thanks was given to the professor and also an invitation to oblige the Ship Masters with another lecture at on early date.

Harbor 33, Chicago, of the American Association of Masters and Pilots, have added nine new members to the association already this year and two more members will be initiated at their meeting next Thursday.

The Dunham Tug Co. towed the barge Tasmania to the Santa Fe and Indiana elevators to load; the steamers Samoa and Paschal P. Pratt to Armor's E elevator; steamer Uganda to the city elevator; schooner J. C. Fitzpatrick to the Iowa elevator; steamer L. R. Doty to Armor's A and B elevators; steamer City of Berlin and schooner A. M. Ash to Miller Bros'. dry-docks.

The Independent Tug Line towed the steamer Penobscot to South Chicago Tuesday afternoon; the steamer New Orleans to the Armour E elevator to load; the steamer Kittie M. Forbes from the Minnesota elevator, where she re-loaded her cargo of corn, to her winter dock between Lake and Randolph streets.

The going grain rates this week are 2¼c on corn to Buffalo. P. H. Fleming & Co. chartered the steamer Ionia at that rate.

Capt. W. H. Irvine who has been here since the close of navigation looking after the repairs on the Millen fleet, left for Detroit Tuesday night.

Capt. D. Nicholson is here looking after the repairs doing on the barge J. H. Rutter.

Capt. H. L. Mills is here looking after the repairs on the steamer John Harper.

Capt. C. Wilson is here looking after the repairs to the steamer Uganda.

Capt. John Buie is here looking after the repair work to the steamer City of Berlin.

John Eberlien has been appointed master of the barge J. H. Rutter for the coming season. WILLIAMS.

DULUTH AND SUPERIOR.

AN EXTENSION PLANT TO CHANGE ITS BASE—INTERESTING FIGURES OF LAST SEASON'S FREIGHTS.

Special Correspondence to The Marine Record.

As a result of a visit here recently by J. A. Opperman, of Bay City, Mich., the Columbia Iron Works, of which he is one of the owners, will shortly be removed to Duluth. The works heretofore have confined their work largely to the marine trade, but upon becoming located here will undertake all classes of iron work.

Capt. B. B. Inman is contemplating retiring from the log towing business. He is figuring on the sale of his outfit, and if the deal goes through he will confine his attention exclusively to boats.

Freight rates on lumber shipped from Duluth last season ruled as follows, there having been no effort to give the rates after the prohibitive bulge last fall:

	Chicago.	Buffalo.	Cleveland.
March	$1.75	$1.62½	$1.50
April	1.75	1.62½	1.50
May	1.75	1.62½	1.50
June to July 3	1.75	1.62½	1.50
July	1.75	1.50@62½	1.50
August 7	1.87½	1.75	1.62½
August 14	2.00	1.75	1.62½
August 21	2.12½	1.87½	1.75
August 28	2.12½	2.00	1.87½
September 4	2.12@25	2.00	1.87½
September 11	2.25	2.12½	2.00
September 18	2.50	2.12½@25	2.00

From this time on there was practically no lumber rate. The rate demanded was away and beyond the possibility of shipping lumber, and there was only a charter or two made after this time, so that there was practically no freight market.

Assistant Secretary Hamlin, of the Treasury Department, will probably report in favor of continuing the practice of storing Canadian wheat in bond in American elevators until wanted in Canadian mills, to which some objection has been raised. The Treasury Department will provide regulations for such storage, thus giving the practice official endorsement.

There is now in store here 9,914,020 bushels of wheat in elevators, and 512,000 afloat in the harbor, an aggregate of 10,426,020. That not afloat is apportioned as follows among the various terminals and elevator lines: Belt Line, 1,238,007; Consolidated, 2,563,043; Globe, 3,645,999; Great Northern, 683,953; Superior Terminal, 1,403 290; Consolidated B, 250,122; Consolidated H, 128,516. Wheat in store at Minneapolis is 20,144,395 bushels.

PORT HURON.

LAKE HURON AND ST. CLAIR RIVER FULL OF ICE—FITZGERALD BROS. BUILDING A NEW MACHINE SHOP—REPAIR WORK SLACK.

PORT HURON, February 11.

The river is full of ice up to the mouth of Black River and there is ice in Lake Huron as far as the eye can see.

Fitzgerald Bros. are at work with a full gang of men, building a new machine shop. It will be located on the old Fitzgerald Dry-dock Company ground. The building will be 100x50 feet, and three stories high. They will remove the machinery from their old shop, below Mullen's coal dock, abandoning the buildings. The long contested suit went against them. The establishment will continue to be known as the Dry-dock Iron Works.

The Jenks Ship Building Co., began work Monday morning with a big gang of men on Loud & Son's new tug.

There is very little repair work being done now in the local shipyards.

H. E. Runnels and Capt. Dan. Sinclair have purchased the steambarge Maggie Duncan. She will tow the Favorite and Tyson in the lumber trade.

Capt George J. Bennett is at work putting the steambarge Cleveland in first-class condition for the lumber trade. She will ply between Alpena and Ohio ports.

KENDALL.

CLEVELAND.

RUSHING WORK ON NEW COAL SHIPPING AND FUEL DOCKS—CAPTAINS AND ENGINEERS ENTERTAIN.

Cleveland & Buffalo line appointments are as follows: City of Buffalo, master, Capt. John Edwards; chief engineer, J. Y. Rendall; purser, A. D. McLachlan; steward, W. H. Thorp; State of Ohio, master, Capt. W. H. Smith; chief engineer, Antnony Melroy; purser, C. W. Piner; steward, H. Boyds; state of New York, master, Capt. H. McAlpin; chief engineer, William Steen, purser and steward not yet appointed.

The Marine engineers of Cleveland, Branch 2, M. E. B. A., enjoyed a huge time with their friends at Merrill's Hall, on Pearl street, Monday evening. The fifteenth annual ball was even more successful than its predecessors and the three hundred people present. All report it a most enjoyable occasion and wish it came twice a year. Come to think of it, the lake-faring men ought to give a farewell reception in the spring as in these days of quick trips and many of them they hardiy have an opportunity to visit their familes, much less to call upon their friends durlng the season.

The Cuddy-Mullen Co., the well-known coal shippers and fuel men, have opened an office on the fifth floor of the Perry-Payne building.

Capt. Mullen, of Mullen & Gatfield, fuelers at Amherstburg, was in the city Monday. It is probable that increasing business will force this firm to enlarge their plaut.

The extensive repairs of the hoists of the Huron Dock company, at Huron, under the supervision of A. S. Williams, the efficient master mechanic of the company, are being pushed to completion rapidly, though some time will elapse before completion owing to the damage done the machines during the storm a month or two since.

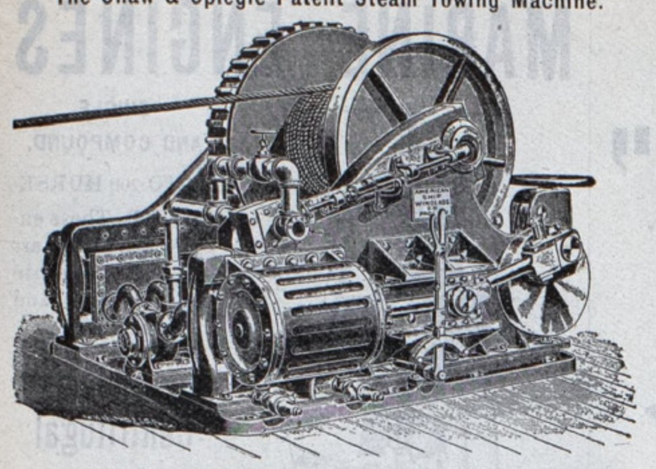
Osborne, Seager & Co., will construct a fueling dock on the west side of the river a short distance below the Long car dumping machine. They expect to have it ready for work by the opening of navigation.

The new Cuddy-Mullen dock on the lake front, just east of the river, is finished, and the construction of the new coal-loading machine on that dock has begun. It is a McMyler machine, but entirely different from that which is in operation at Ashtabula. Its capacity is said to be 3,000 tons per day.

The Ship Masters' ball is a feature of the annual grand social functions of Cleveland, and Wednesday evening's reception was no exception to the rule. The gathering at Army and Navy Hall was a most brilliant one, and taxed the the capacity of the hall. Credit for the grand success scored is due to all the members of the local lodge.

Capt. Hi. Henderson has purchased the schooner Typo from W. H. Hargrave, of Detroit, for $5,000.

The Shaw & Spiegle Patent Steam Towing Machine.



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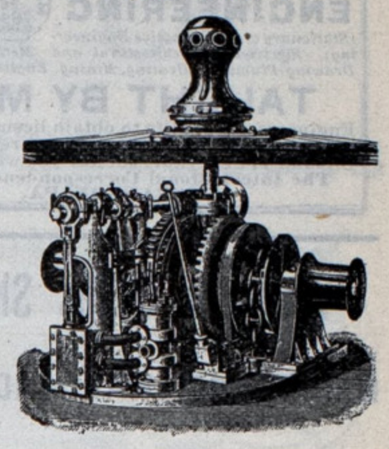

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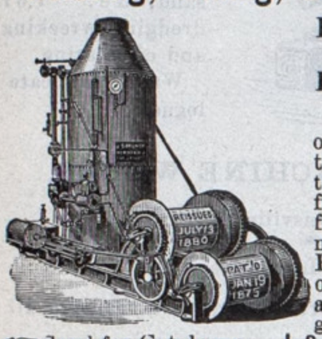

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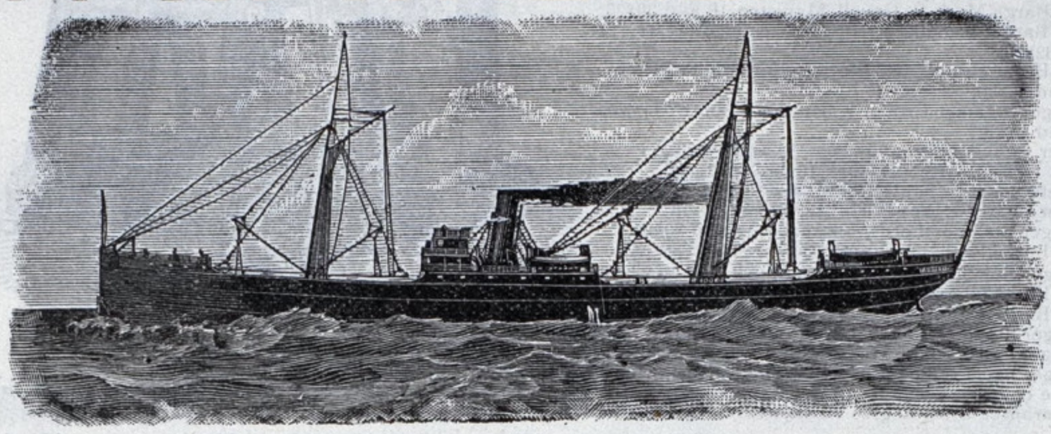

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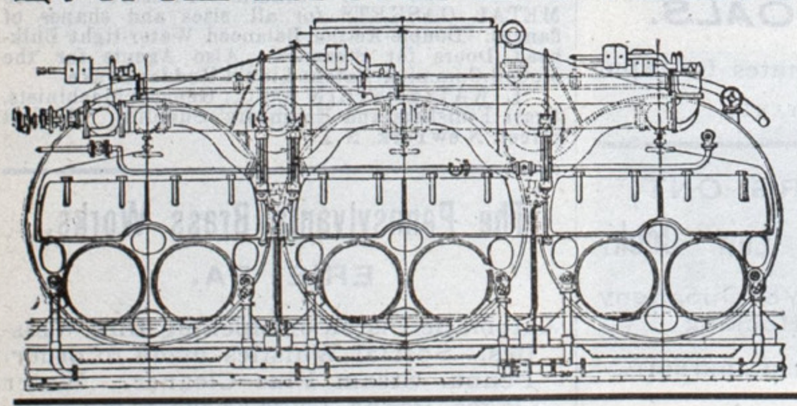

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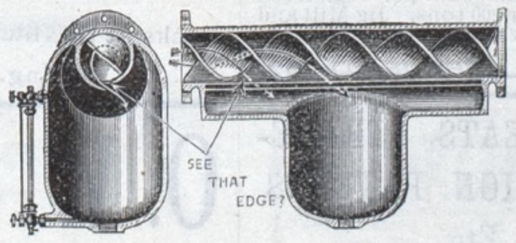

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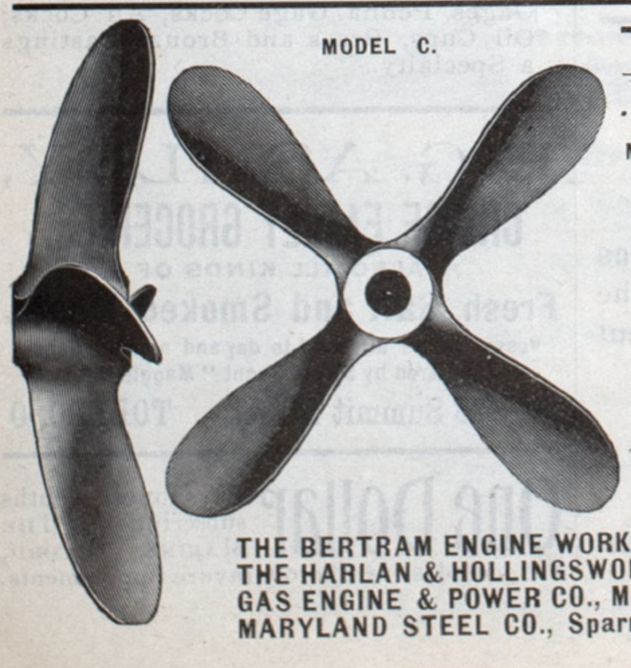

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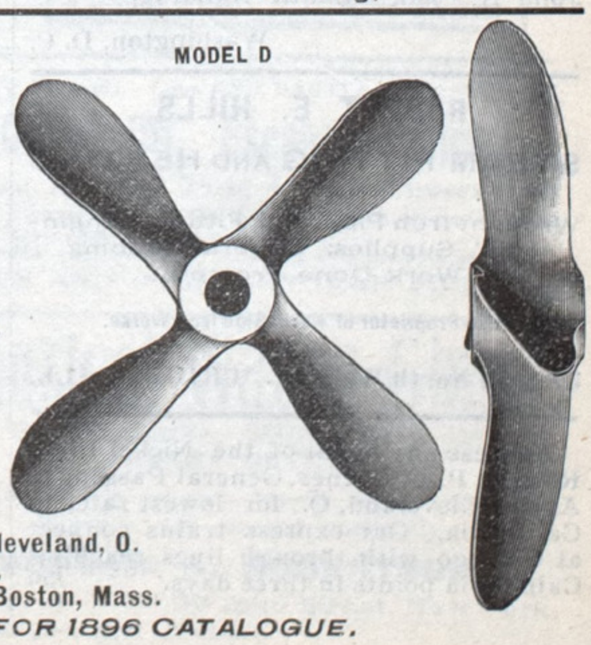

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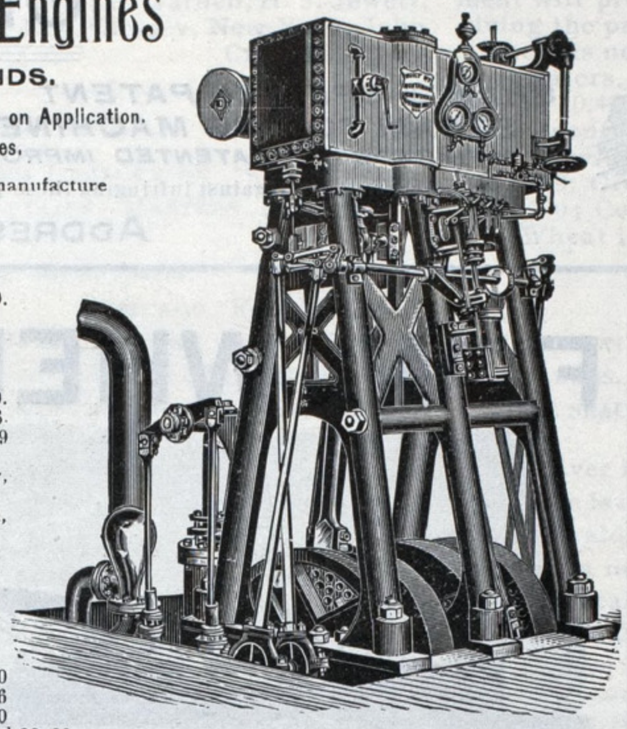

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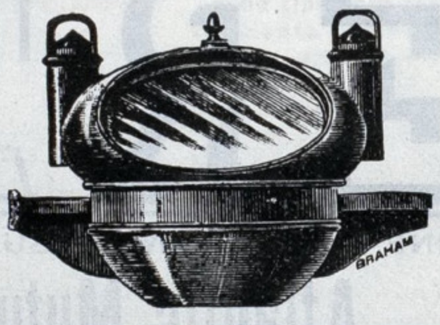

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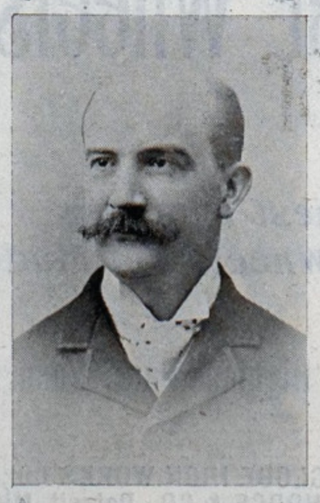

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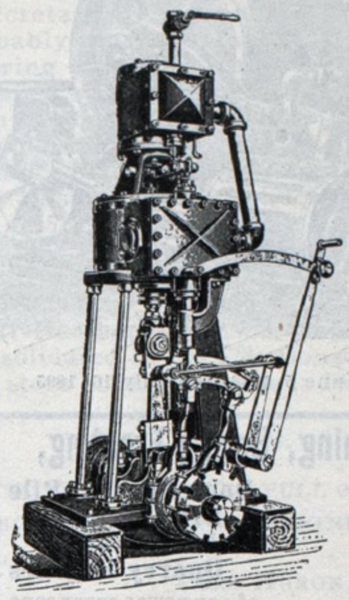

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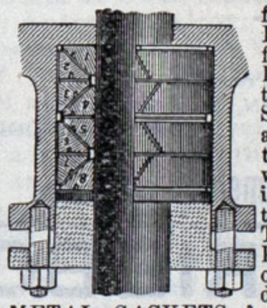

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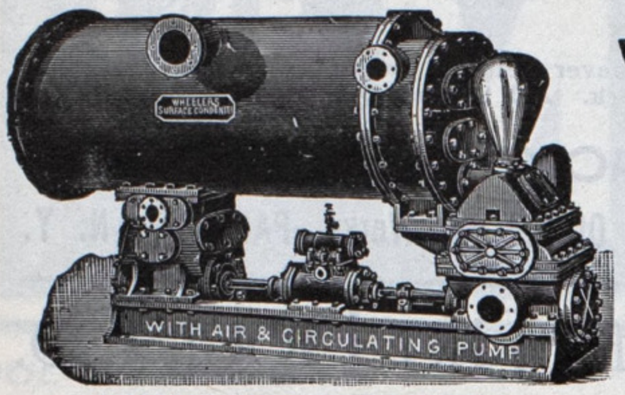

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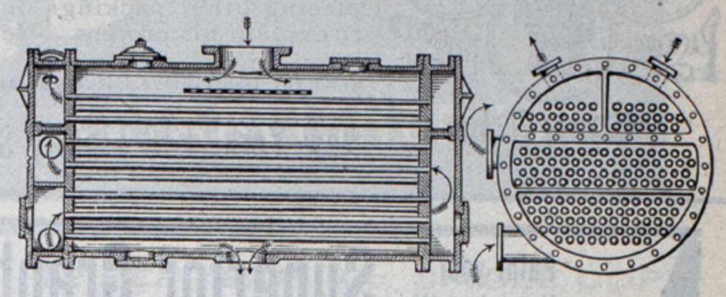

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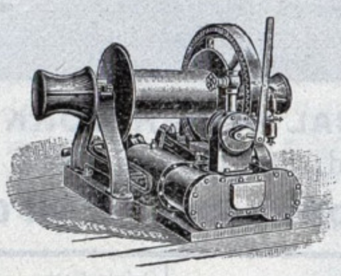

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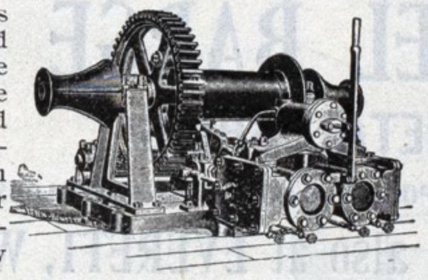

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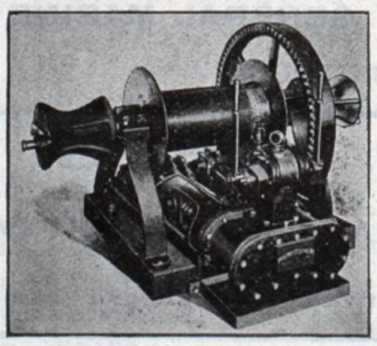

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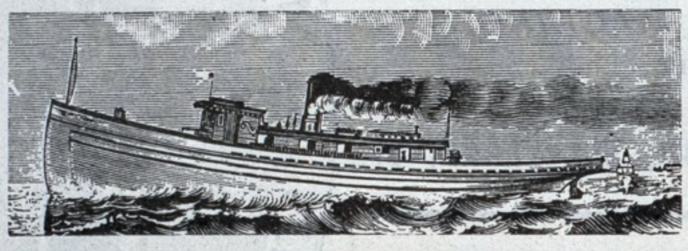

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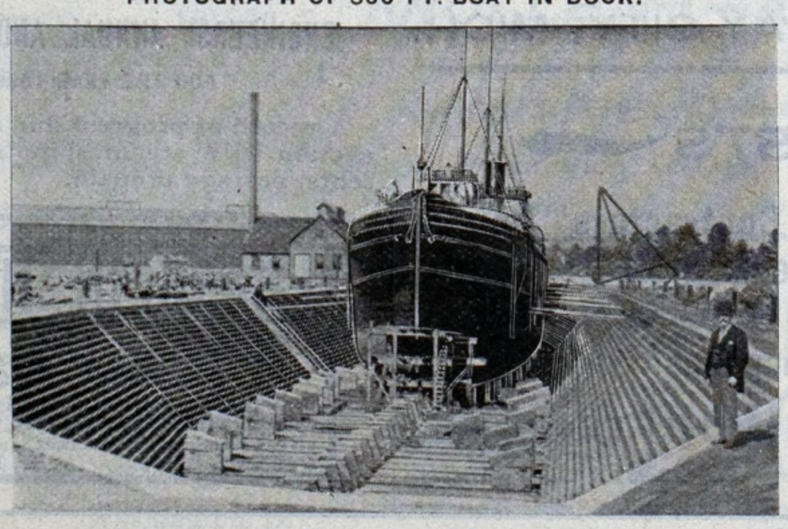

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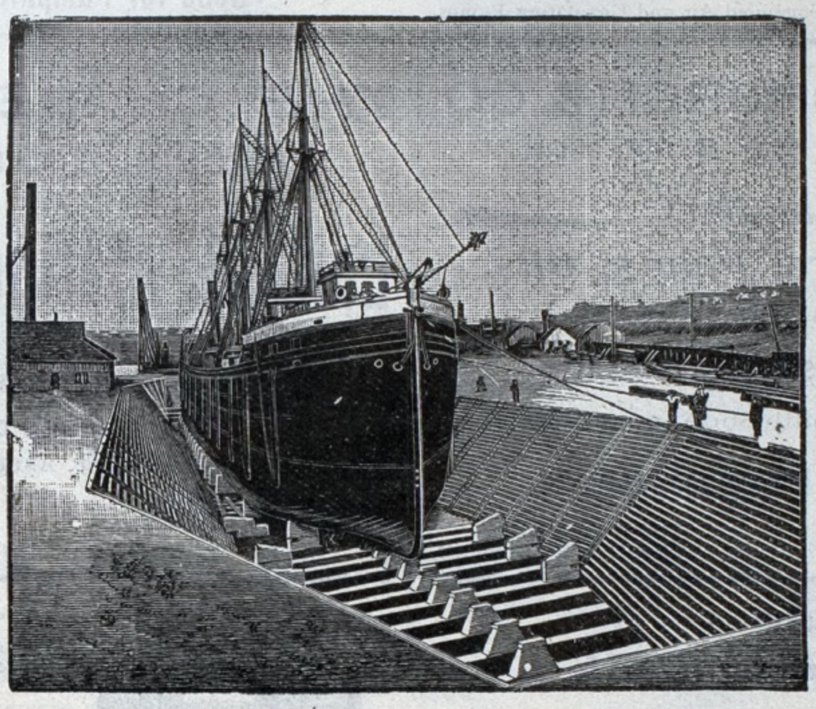

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